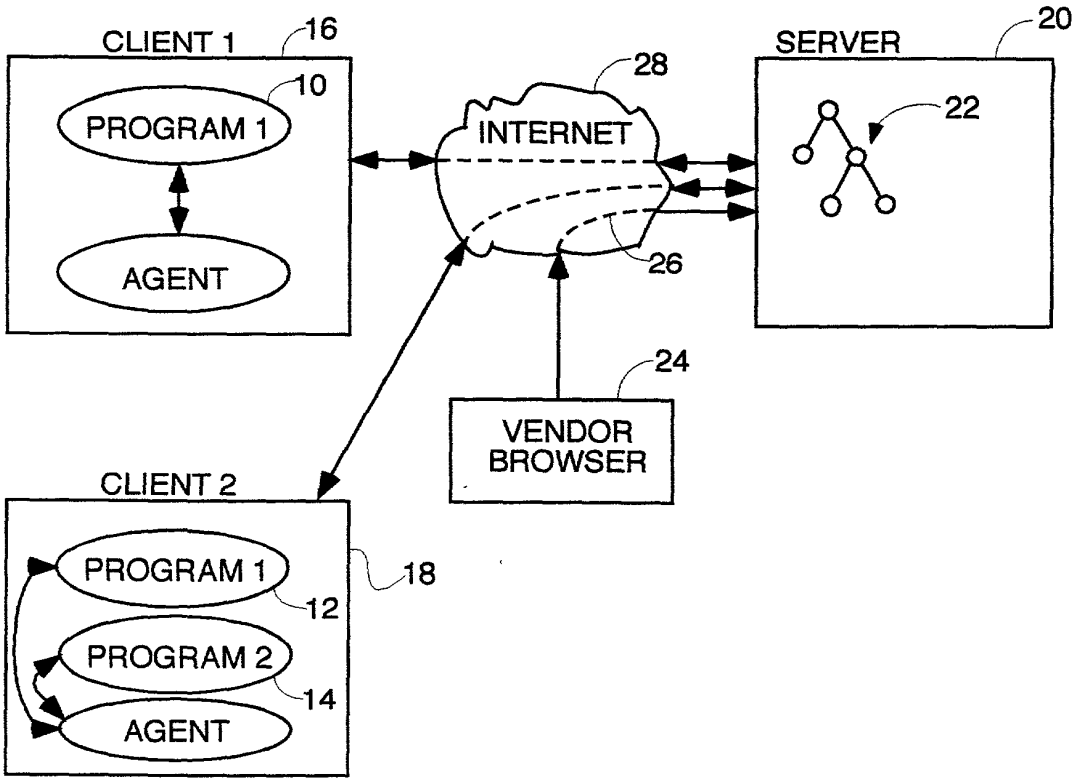
CLIENT 1
16
10
PROGRAM 1
AGENT
28
INTERNET
26
SERVER
20
22
24
VENDOR
BROWSER
CLIENT 2
18
PROGRAM 1
12
PROGRAM 2
14
AGENT

FIG. 1

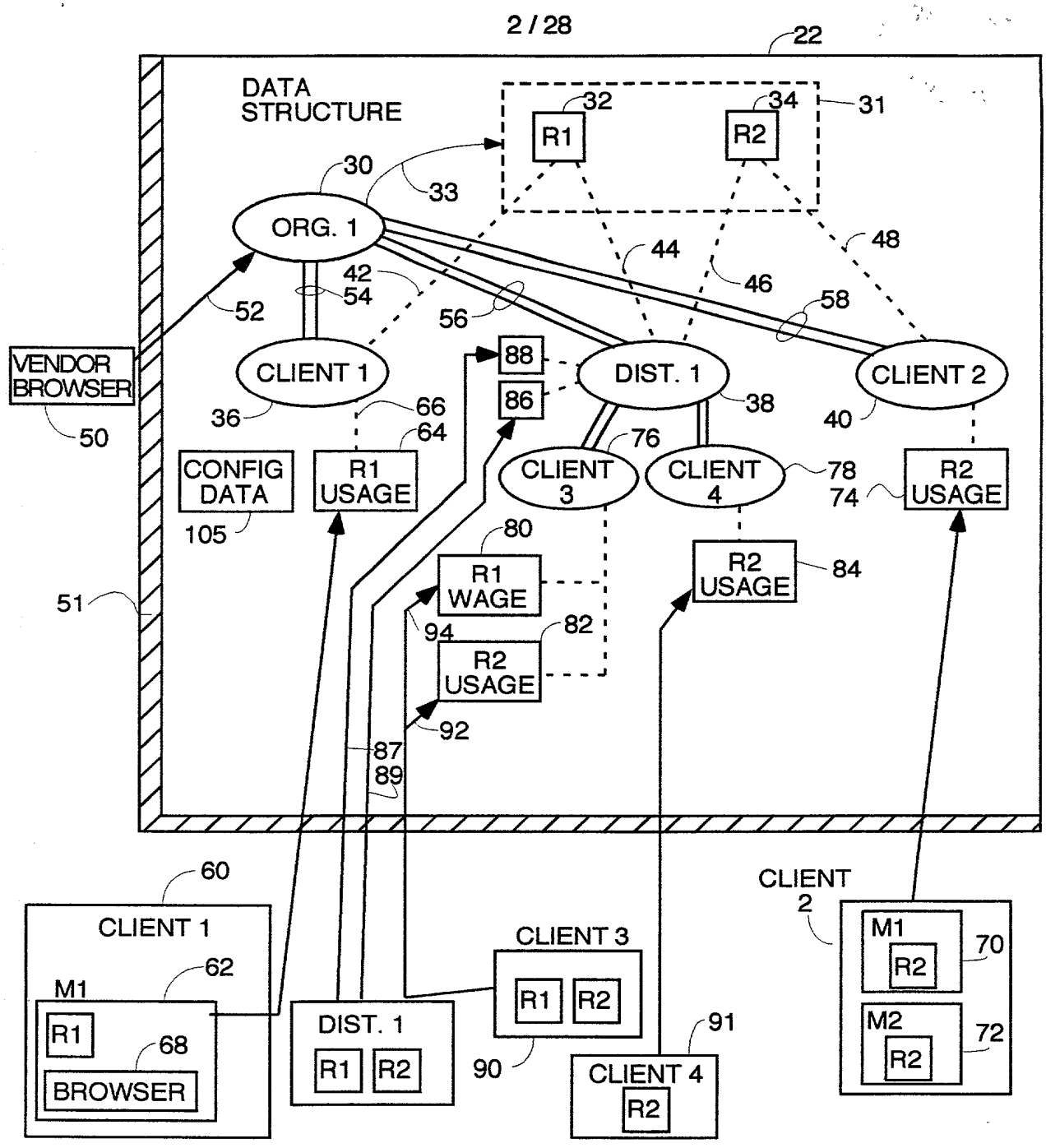
22
DATA STRUCTURE
32
34
31
R1
R2
30
33
ORG. 1
44
48
42
54
46
52
56
58
VENDOR BROWSER
CLIENT 1
88
86
DIST. 1
CLIENT 2
50
36
66
64
38
40
CONFIG DATA
R1 USAGE
76
CLIENT 3
CLIENT 4
78
74
R2 USAGE
105
80
R1 WAGE
84
R2 USAGE
51
94
82
R2 USAGE
92
87
89
60
CLIENT 1
62
M1
R1
68
BROWSER
DIST. 1
R1
R2
CLIENT 3
R1
R2
90
91
CLIENT 4
R2
CLIENT 2
M1
R2
70
M2
R2
72

FIG. 2

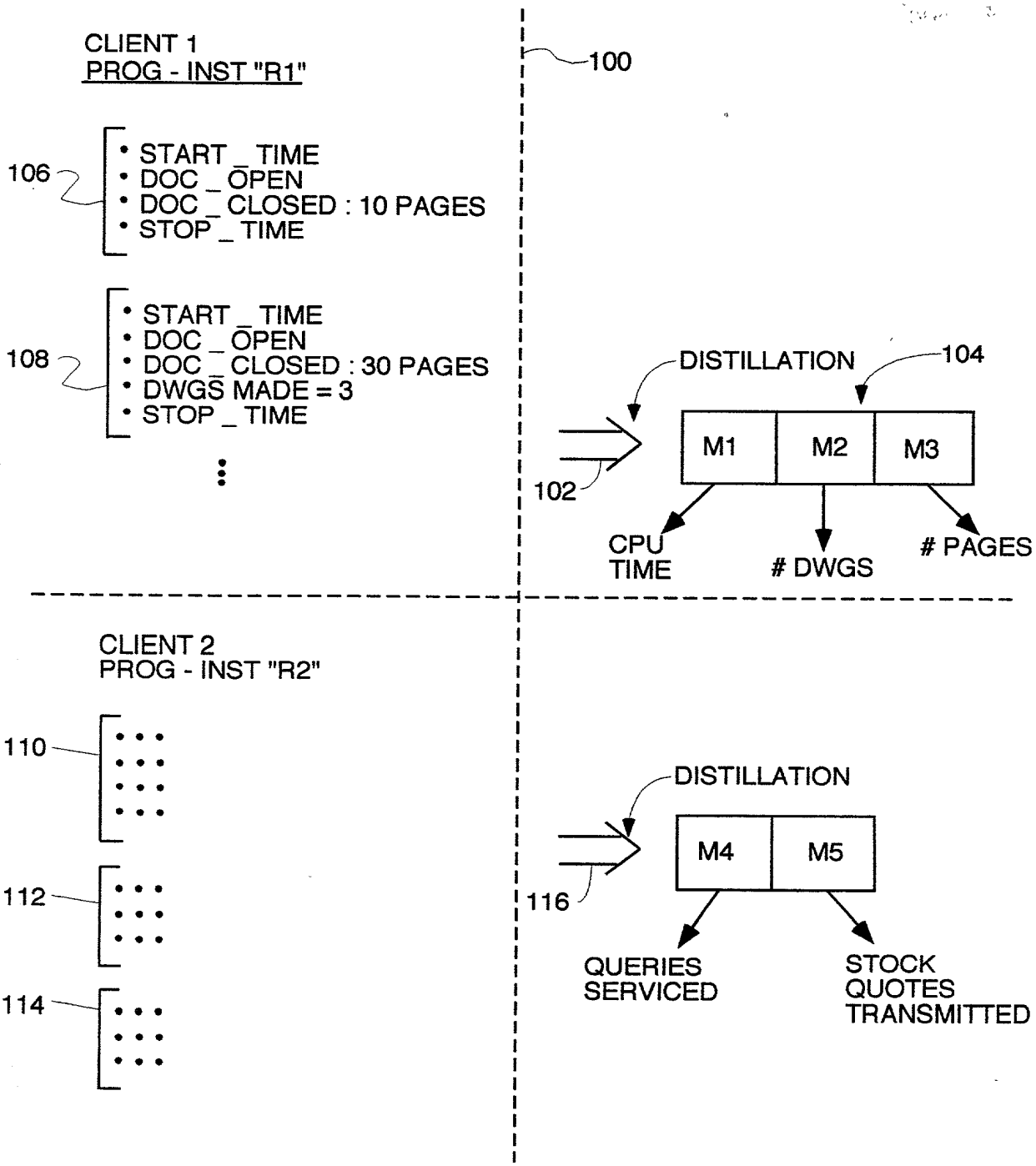
CLIENT 1
PROG - INST "R1"
100
106
• START _ TIME
• DOC _ OPEN
• DOC _ CLOSED : 10 PAGES
• STOP _ TIME
108
• START _ TIME
• DOC _ OPEN
• DOC _ CLOSED : 30 PAGES
• DWGS MADE = 3
• STOP _ TIME
DISTILLATION
104
M1
M2
M3
102
CPU TIME
DWGS
PAGES
CLIENT 2
PROG - INST "R2"
110
112
114
DISTILLATION
M4
M5
116
QUERIES SERVICED
STOCK QUOTES TRANSMITTED

FIG. 3

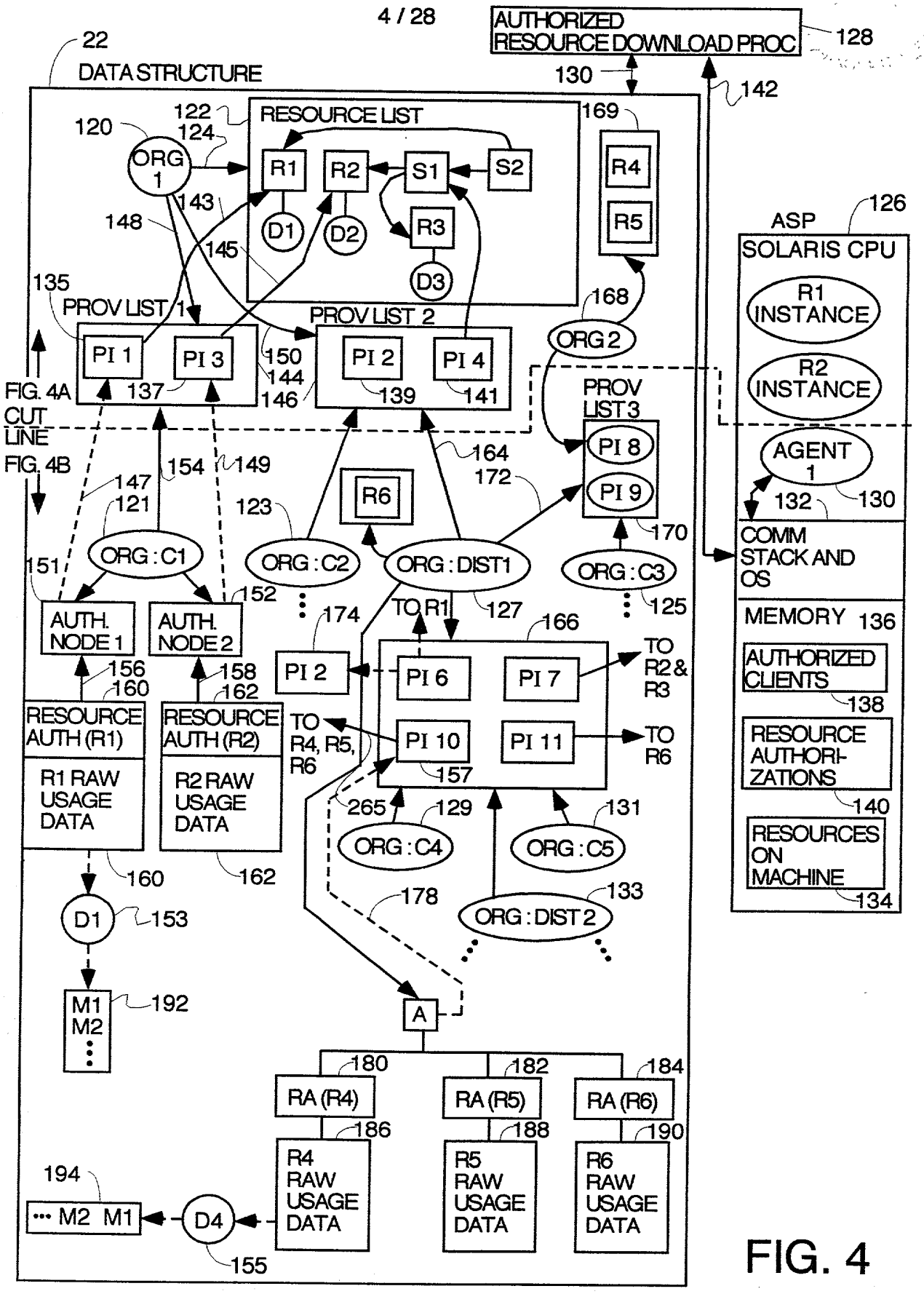
AUTHORIZED RESOURCE DOWNLOAD PROC
128
130
142
22
DATA STRUCTURE
RESOURCE LIST
120
122
124
169
ORG 1
R1
R2
S1
S2
R4
R5
143
148
145
D1
D2
R3
D3
ASP
126
SOLARIS CPU
R1 INSTANCE
R2 INSTANCE
AGENT 1
132
130
135
PROV LIST 1
PROV LIST 2
168
ORG 2
PI 1
PI 3
PI 2
PI 4
150
144
146
137
139
141
FIG. 4A
CUT LINE
FIG. 4B
PROV LIST 3
PI 8
PI 9
164
172
170
147
154
149
121
123
R6
ORG : C1
ORG : C2
ORG : DIST1
ORG : C3
COMM STACK AND OS
151
152
125
AUTH. NODE 1
AUTH. NODE 2
174
TO R1
127
166
MEMORY 136
156
158
160
162
PI 2
PI 6
PI 7
TO R2 & R3
AUTHORIZED CLIENTS
138
RESOURCE AUTH (R1)
RESOURCE AUTH (R2)
TO R4, R5, R6
PI 10
PI 11
TO R6
RESOURCE AUTHORI-ZATIONS
140
R1 RAW USAGE DATA
R2 RAW USAGE DATA
157
265
129
131
RESOURCES ON MACHINE
134
ORG : C4
ORG : C5
160
162
178
133
D1
153
ORG : DIST 2
M1
M2
192
A
180
182
184
RA (R4)
RA (R5)
RA (R6)
186
188
190
194
R4 RAW USAGE DATA
R5 RAW USAGE DATA
R6 RAW USAGE DATA
... M2 M1
D4
155

FIG. 4

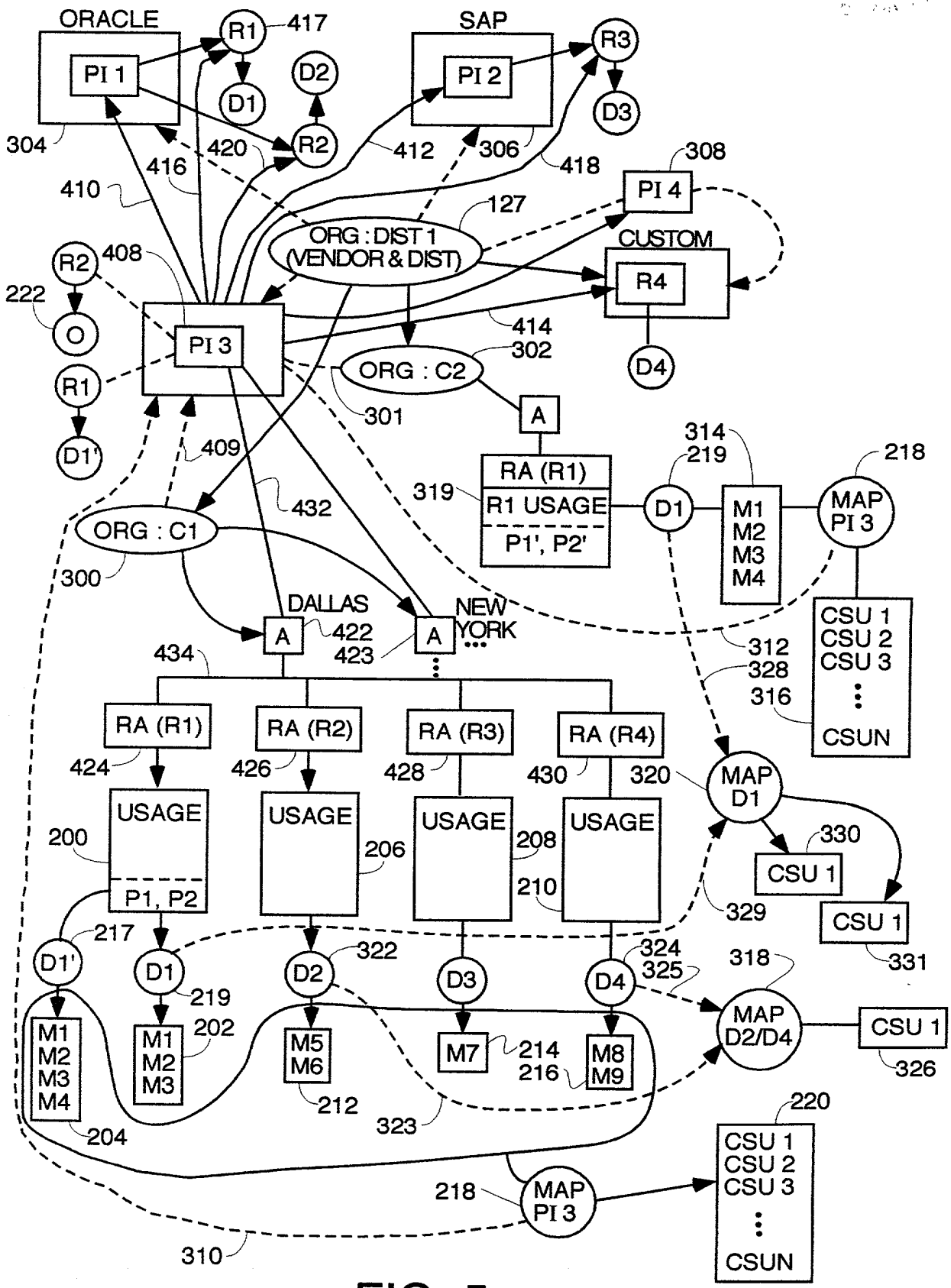
ORACLE
PI 1
R1
417
D1
D2
R2
304
420
416
410
SAP
PI 2
R3
D3
412
306
418
308
PI 4
127
ORG : DIST 1
(VENDOR & DIST)
CUSTOM
R4
D4
R2
408
222
O
R1
D1'
PI 3
409
414
302
ORG : C2
301
A
RA (R1)
R1 USAGE
P1', P2'
319
314
219
D1
M1
M2
M3
M4
218
MAP
PI 3
CSU 1
CSU 2
CSU 3
CSUN
312
328
316
ORG : C1
432
300
DALLAS
NEW
YORK
A
422
423
434
RA (R1)
RA (R2)
RA (R3)
RA (R4)
424
426
428
430
320
MAP
D1
USAGE
P1, P2
200
206
208
210
329
330
CSU 1
CSU 1
331
217
D1'
D1
D2
D3
D4
322
324
325
318
219
202
M1
M2
M3
M4
M5
M6
M7
M8
M9
214
216
212
323
204
MAP
D2/D4
CSU 1
326
220
CSU 1
CSU 2
CSU 3
CSUN
218
MAP
PI 3
310

FIG. 5

OVERALL PROCESS TO DISTILL RAW USAGE DATA TO METRIC DATA BY A PROGRAMMABLE MAPPING

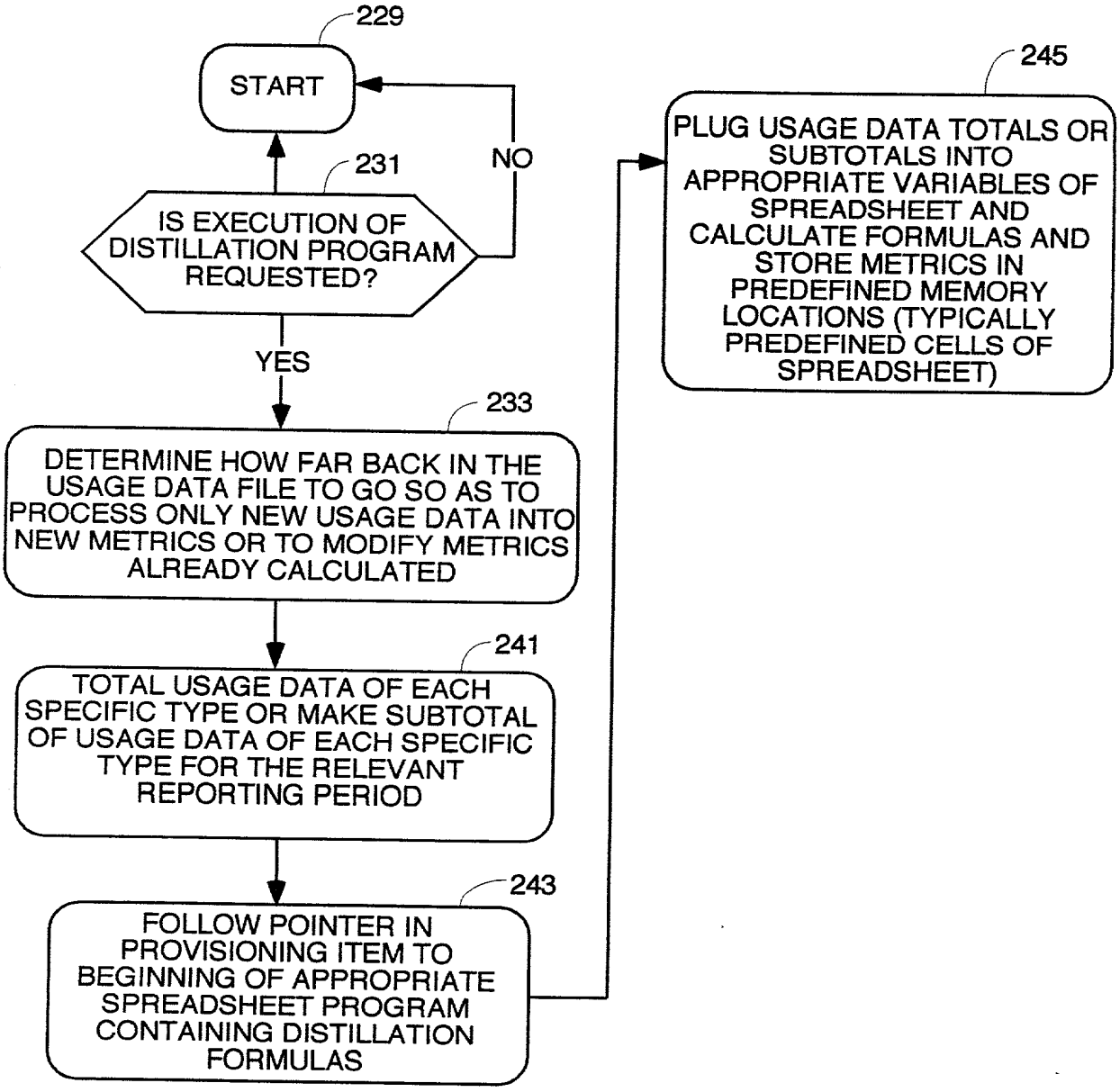

FIG. 6A

OVERALL PROCESS TO DISTILL RAW USAGE DATA TO METRIC DATA BY A PROGRAMMABLE MAPPING USING A PROGRAMMABLE DISTILLATION PGM

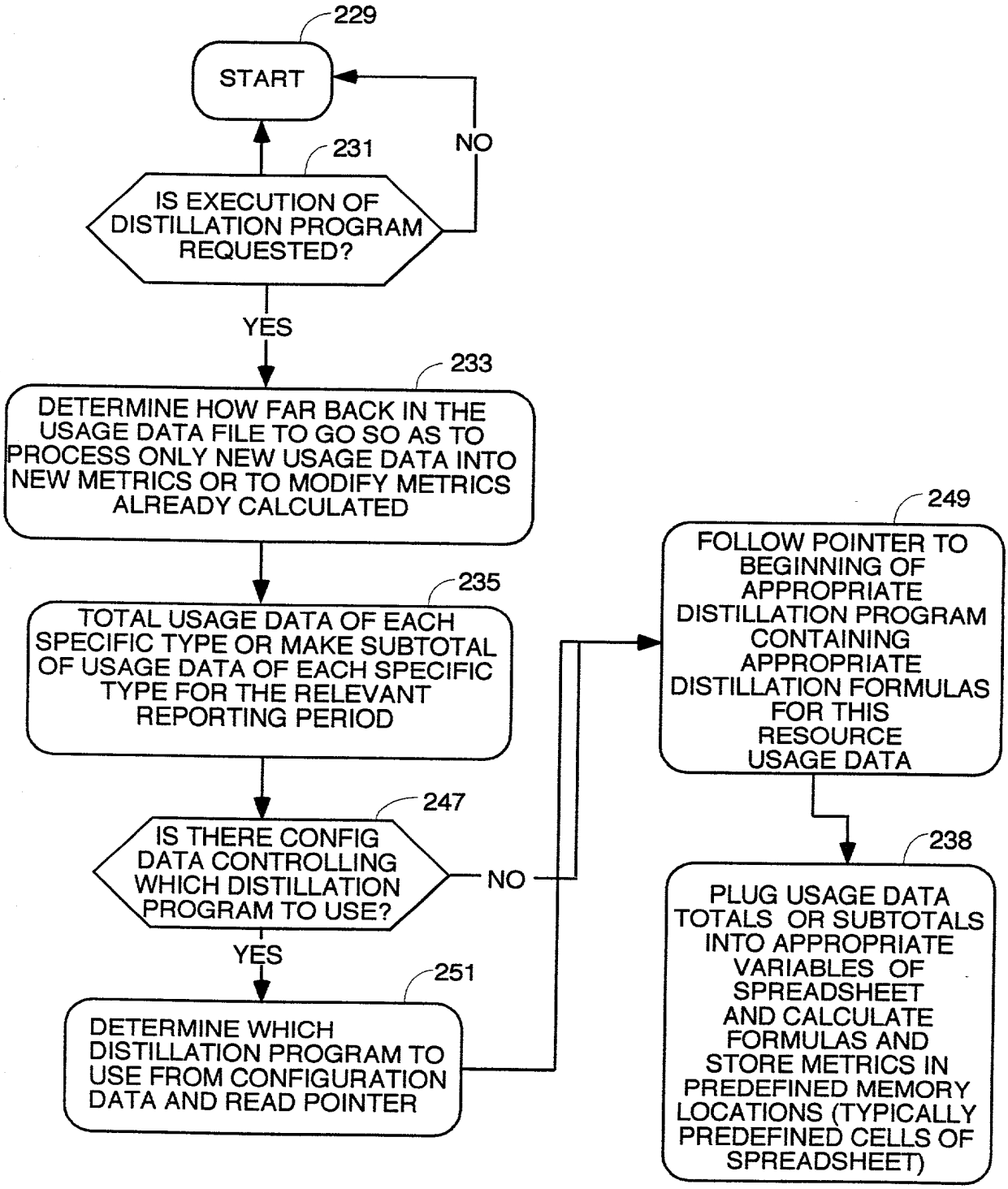

FIG. 6B

PROCESS TO PROGRAMMABLY DISTILL RAW USAGE DATA TO METRICS AND PROGRAMMABLY DISTILL THE METRICS INTO CENTRAL SERVICE UNITS OF THE CUSTOMER'S DESIGN

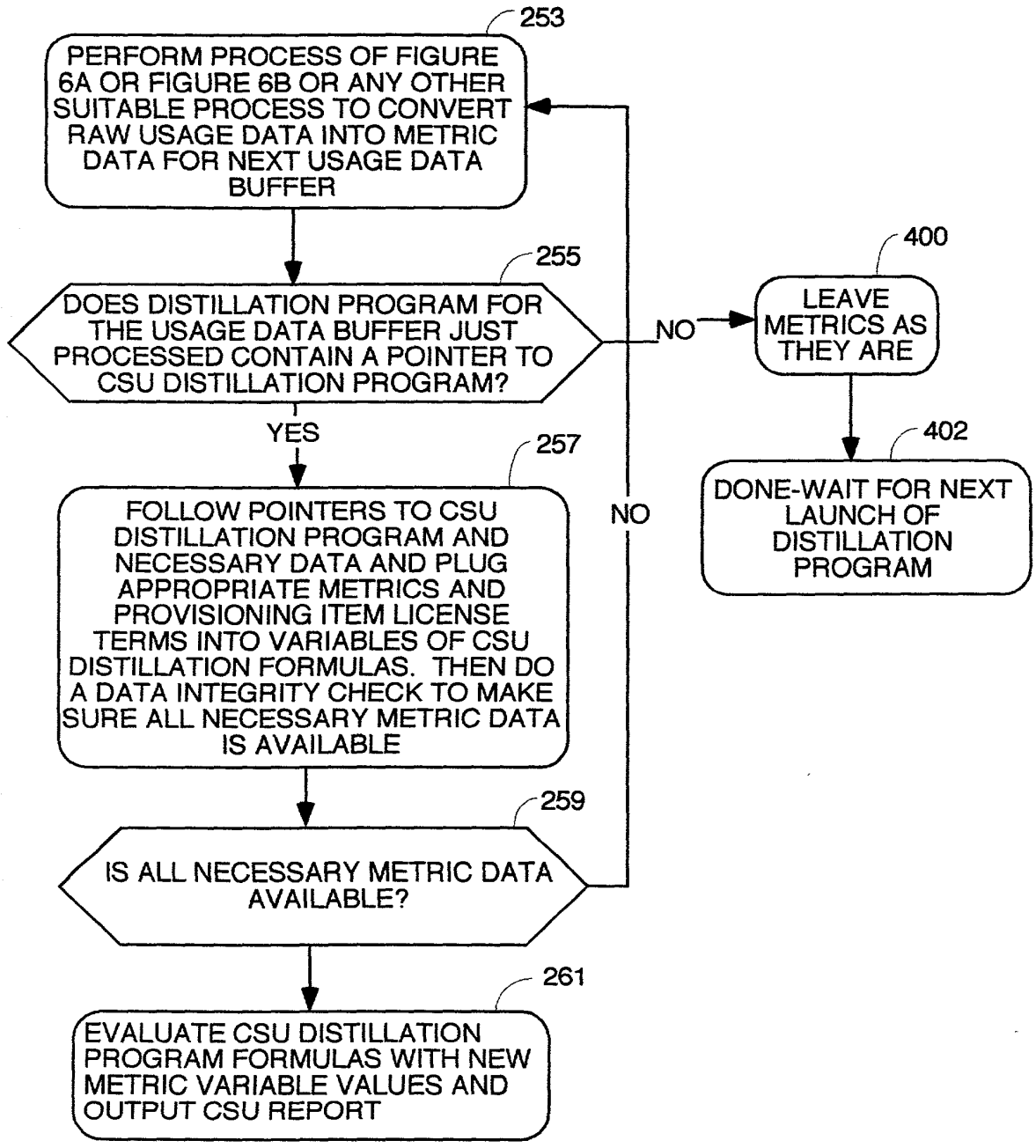

FIG. 7

OVERALL PROCESS TO COLLECT RAW USAGE DATA IN A CENTRAL SERVER AND USE IT TO PREPARE METRICS AND PREPARE INVOICES OR REPORTS THEREFROM

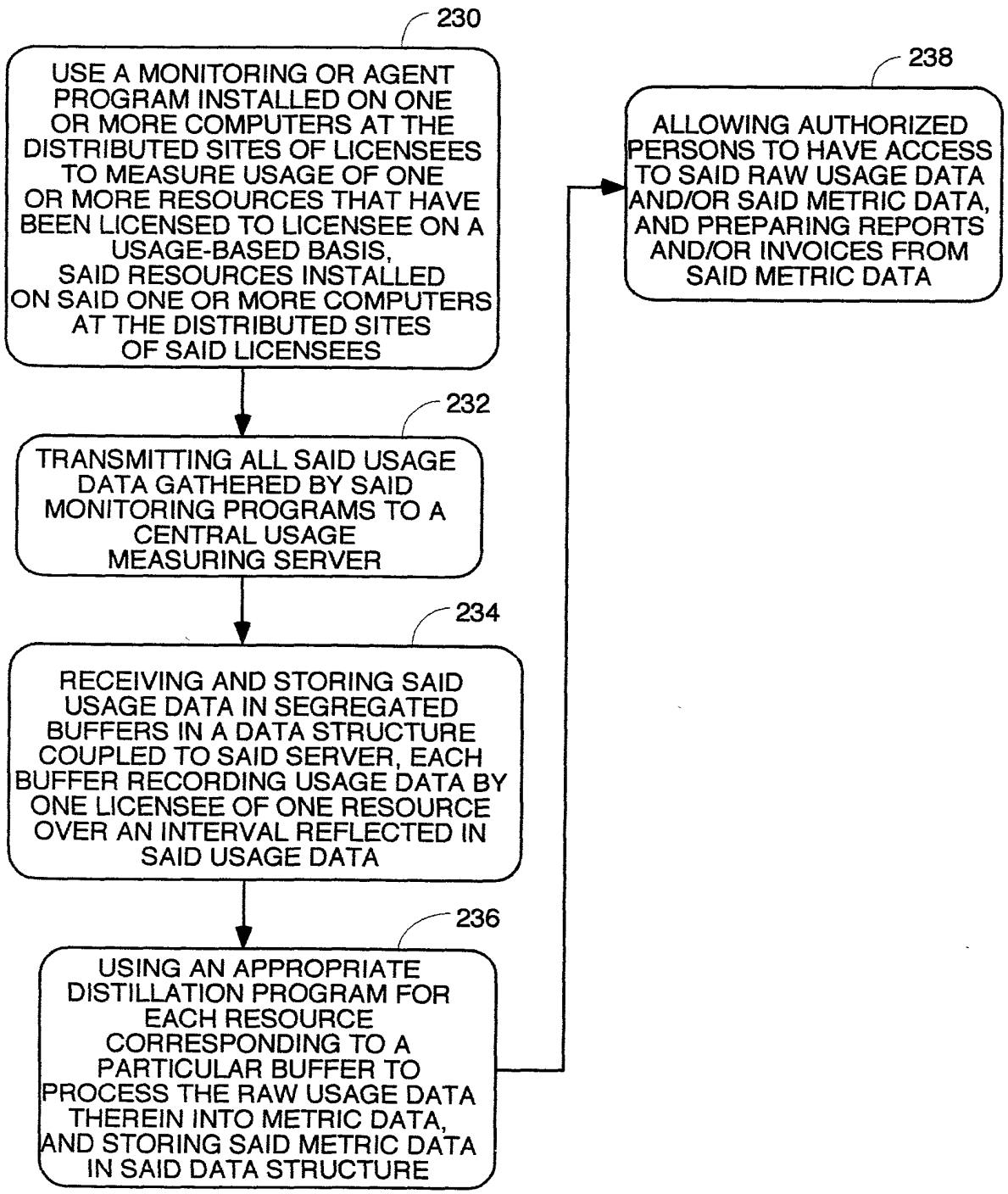

FIG. 8

PROCESS TO BUILD USAGE MEASURING SERVER DATA STRUCTURE AND ALLOW RESTRICTED ACCESS THERETO

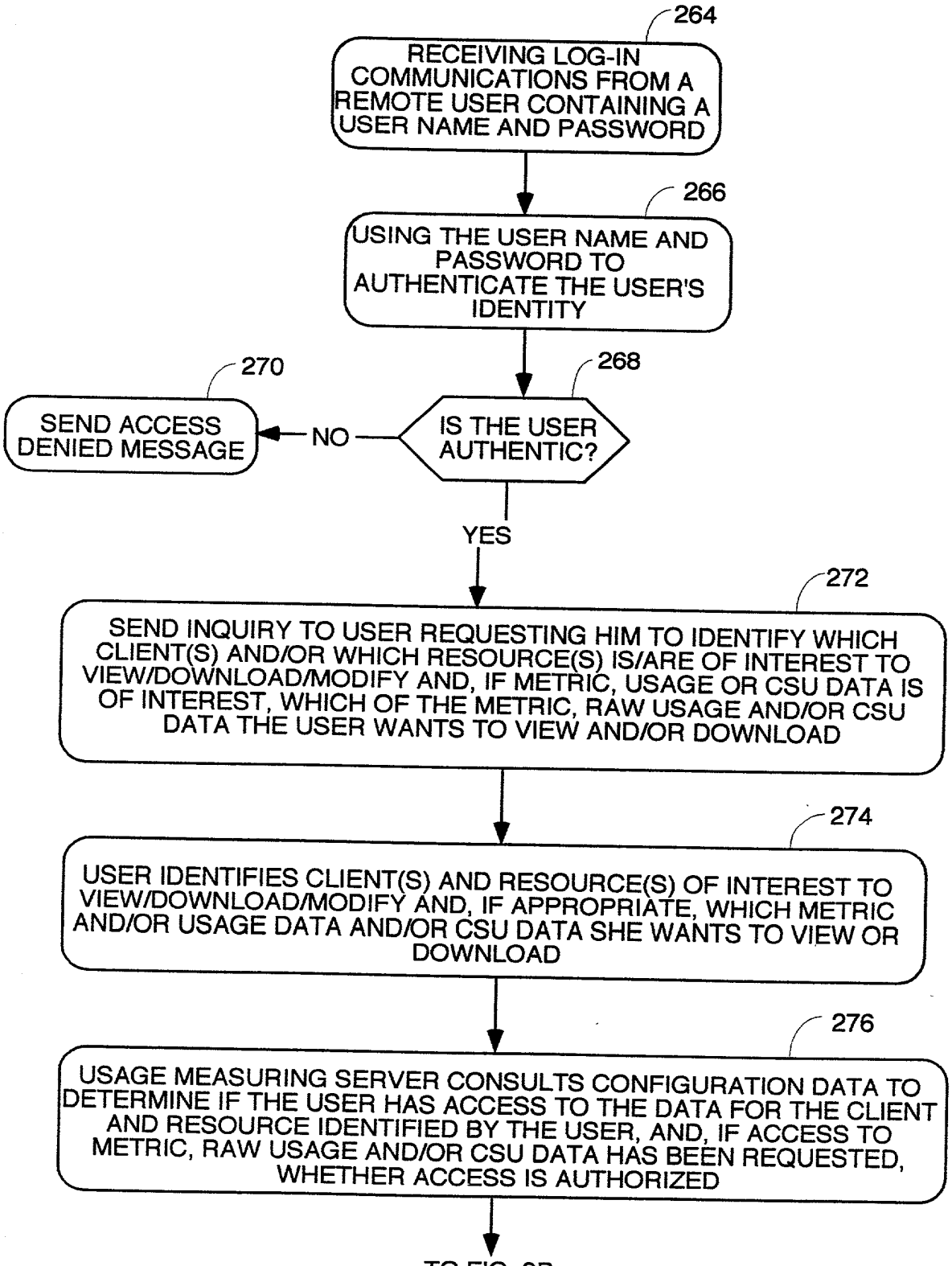

FIG. 9A

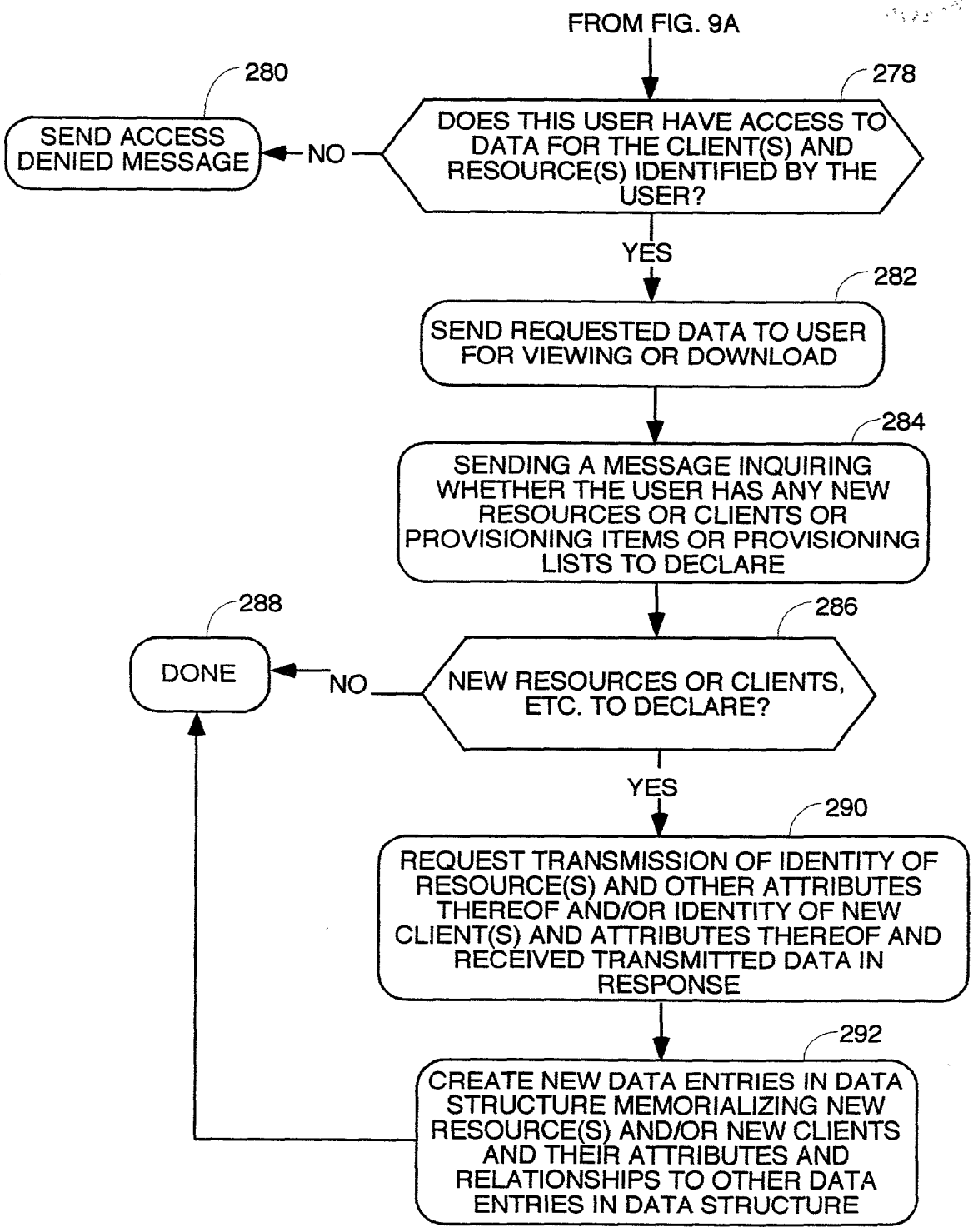
FROM FIG. 9A
278
DOES THIS USER HAVE ACCESS TO DATA FOR THE CLIENT(S) AND RESOURCE(S) IDENTIFIED BY THE USER?
NO
280
SEND ACCESS DENIED MESSAGE
YES
282
SEND REQUESTED DATA TO USER FOR VIEWING OR DOWNLOAD
284
SENDING A MESSAGE INQUIRING WHETHER THE USER HAS ANY NEW RESOURCES OR CLIENTS OR PROVISIONING ITEMS OR PROVISIONING LISTS TO DECLARE
286
NEW RESOURCES OR CLIENTS, ETC. TO DECLARE?
NO
288
DONE
YES
290
REQUEST TRANSMISSION OF IDENTITY OF RESOURCE(S) AND OTHER ATTRIBUTES THEREOF AND/OR IDENTITY OF NEW CLIENT(S) AND ATTRIBUTES THEREOF AND RECEIVED TRANSMITTED DATA IN RESPONSE
292
CREATE NEW DATA ENTRIES IN DATA STRUCTURE MEMORIALIZING NEW RESOURCE(S) AND/OR NEW CLIENTS AND THEIR ATTRIBUTES AND RELATIONSHIPS TO OTHER DATA ENTRIES IN DATA STRUCTURE

FIG. 9B

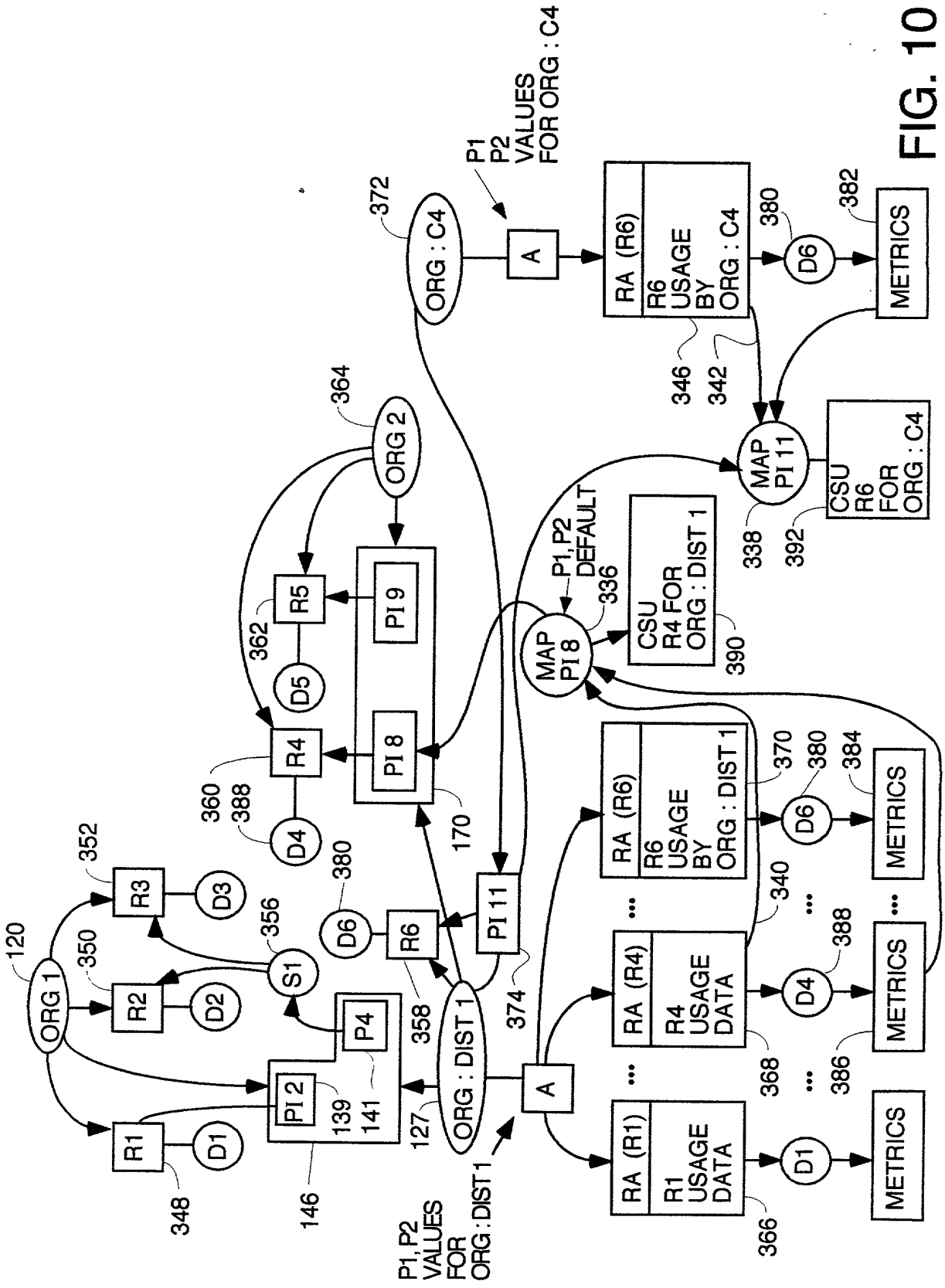
ORG 1
120
R1
D1
348
R2
D2
350
R3
D3
352
S1
356
PI 2
139
141
146
P4
D6
380
R6
358
PI 11
374
ORG : DIST 1
127
P1, P2
VALUES
FOR
ORG : DIST 1
A
ORG : C4
372
P1
P2
VALUES
FOR ORG : C4
ORG 2
364
R4
D4
360
388
R5
D5
362
PI 8
PI 9
170
MAP
PI 8
P1, P2
DEFAULT
336
CSU
R4 FOR
ORG : DIST 1
390
MAP
PI 11
338
CSU
R6
FOR
ORG : C4
392
RA (R6)
R6
USAGE
BY
ORG : C4
346
342
380
D6
382
METRICS
RA (R6)
R6
USAGE
BY
ORG : DIST 1
370
380
D6
384
METRICS
RA (R4)
R4
USAGE
DATA
340
368
388
D4
386
METRICS
RA (R1)
R1
USAGE
DATA
366
D1
METRICS

FIG. 10

ALTERNATIVE PROCESS TO PROGRAMMABLY DISTILL RAW USAGE DATA TO METRICS AND PROGRAMMABLY DISTILL THE METRICS INTO CENTRAL SERVICE UNITS USING A CSU DISTILLATION PROGRAM LINKED TO PROVISIONING ITEM DETAILING LICENSE TERMS

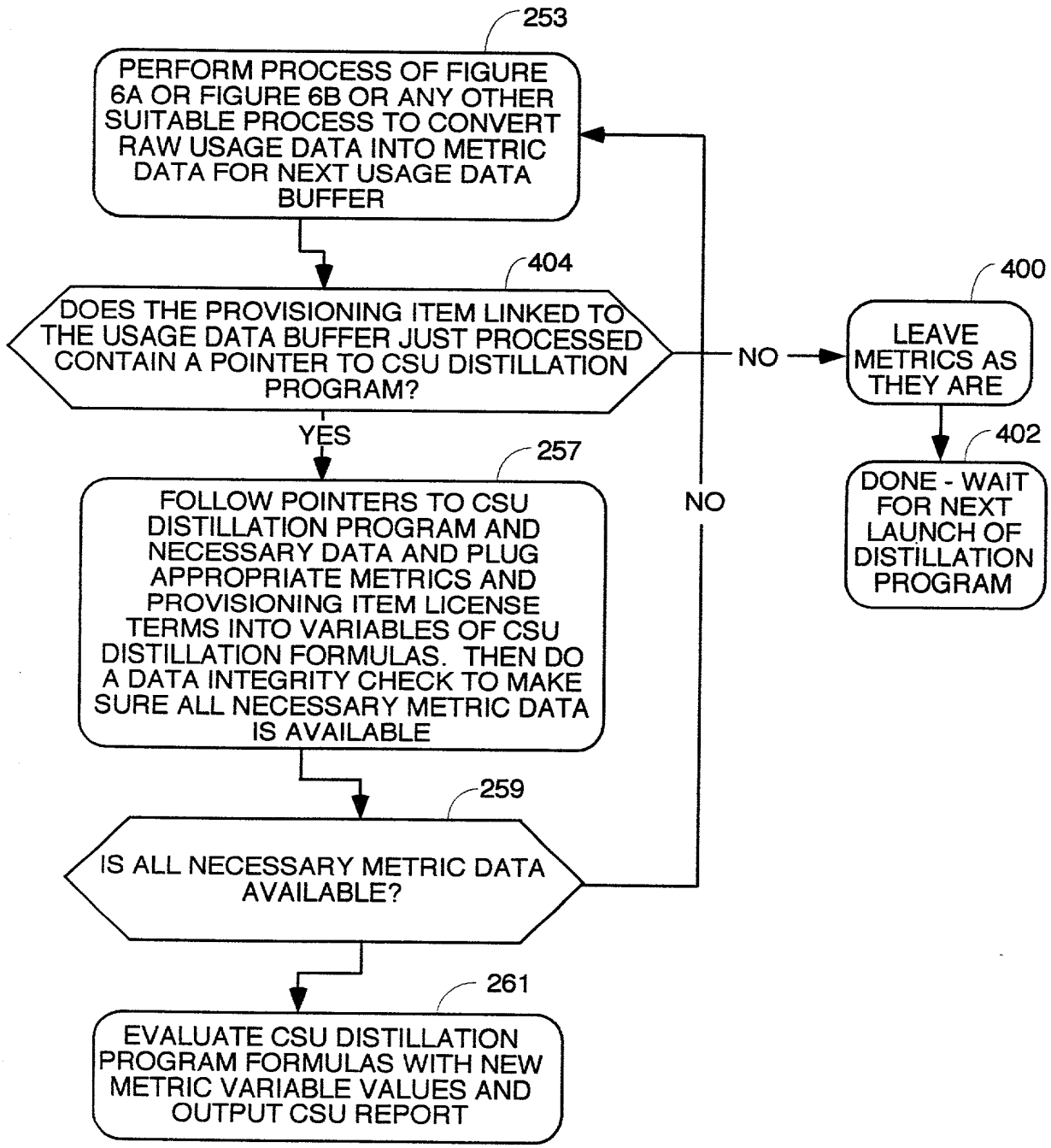

FIG. 11

ALTERNATIVE PROCESS TO PROGRAMMABLY DISTILL RAW USAGE DATA TO METRICS AND PROGRAMMABLY DISTILL THE METRICS INTO CENTRAL SERVICE UNITS USING A CSU DISTILLATION PROGRAM LINKED TO THE USAGE DATA BUFFER OF EACH CLIENT THAT WANTS CSU BASED REPORTS

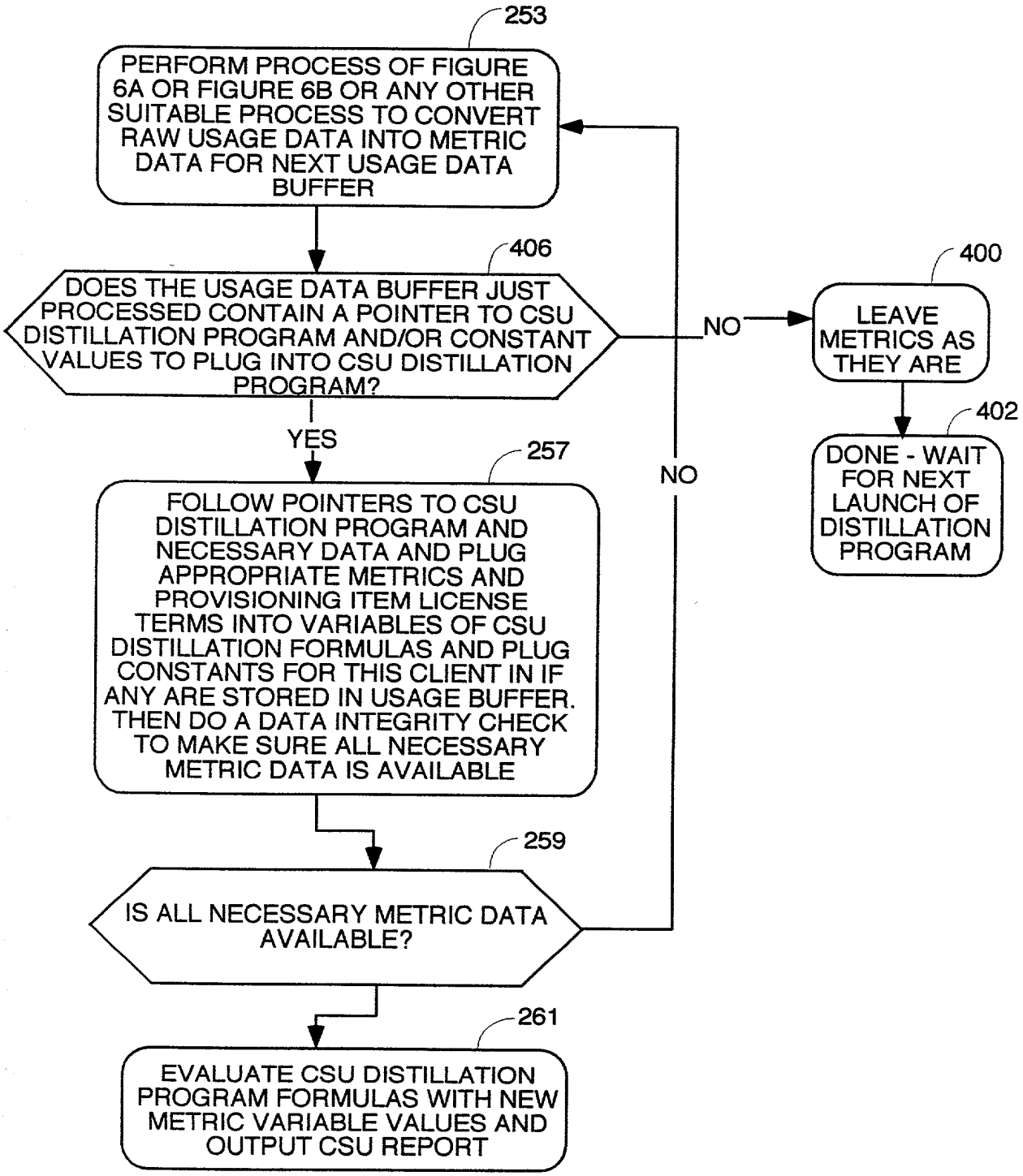

FIG. 12

PROCESS TO CREATE DATA STRUCTURE TO SUPPORT SUITE LICENSING AND TO USE THE DATA STRUCTURE TO IMPLEMENT SUITE LICENSING

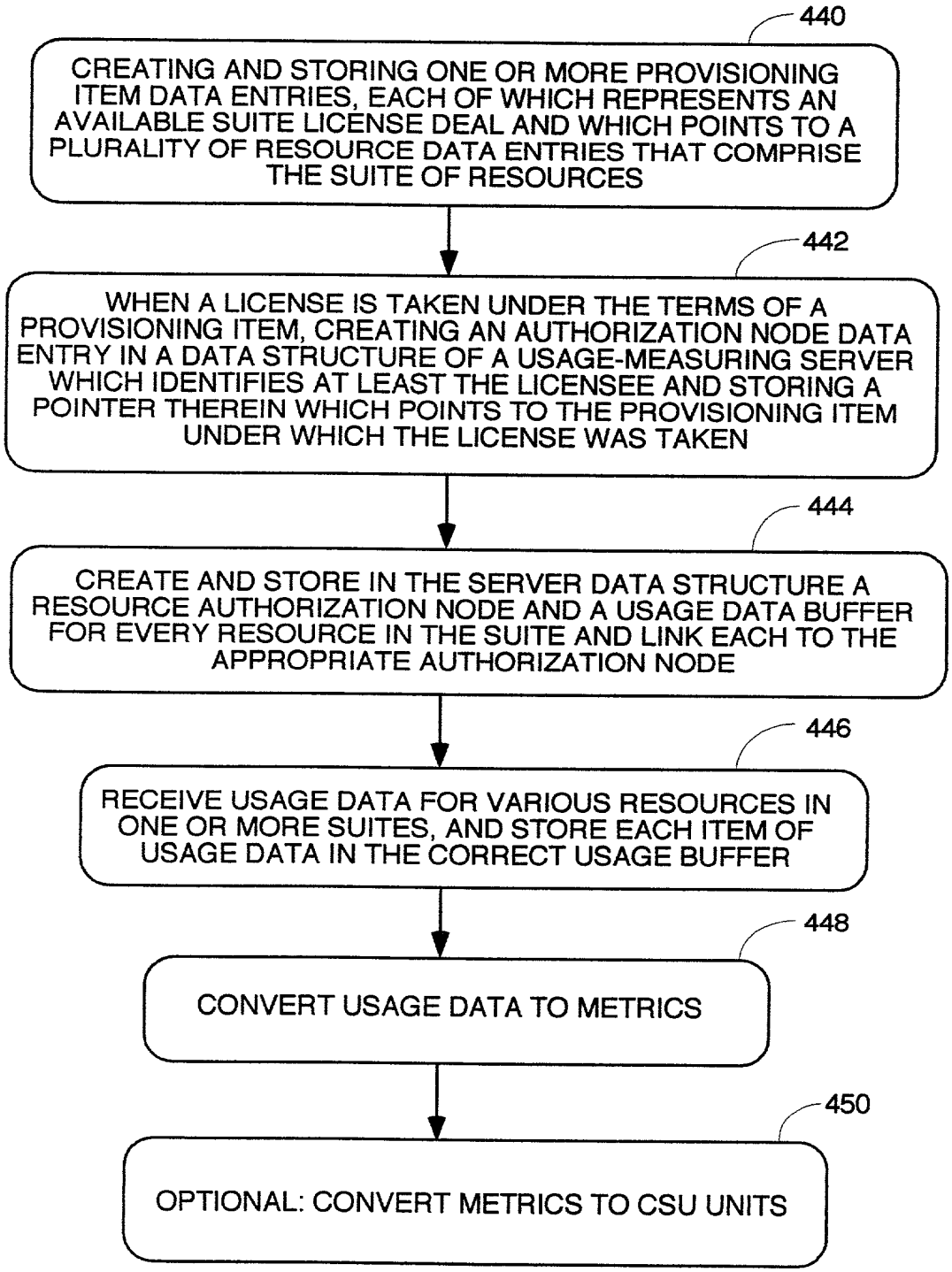

FIG. 13

ONE STOP SHOPPING PROCESS TO DETERMINE ALL AVAILABLE LICENSE DEALS ON A PARTICULAR RESOURCE

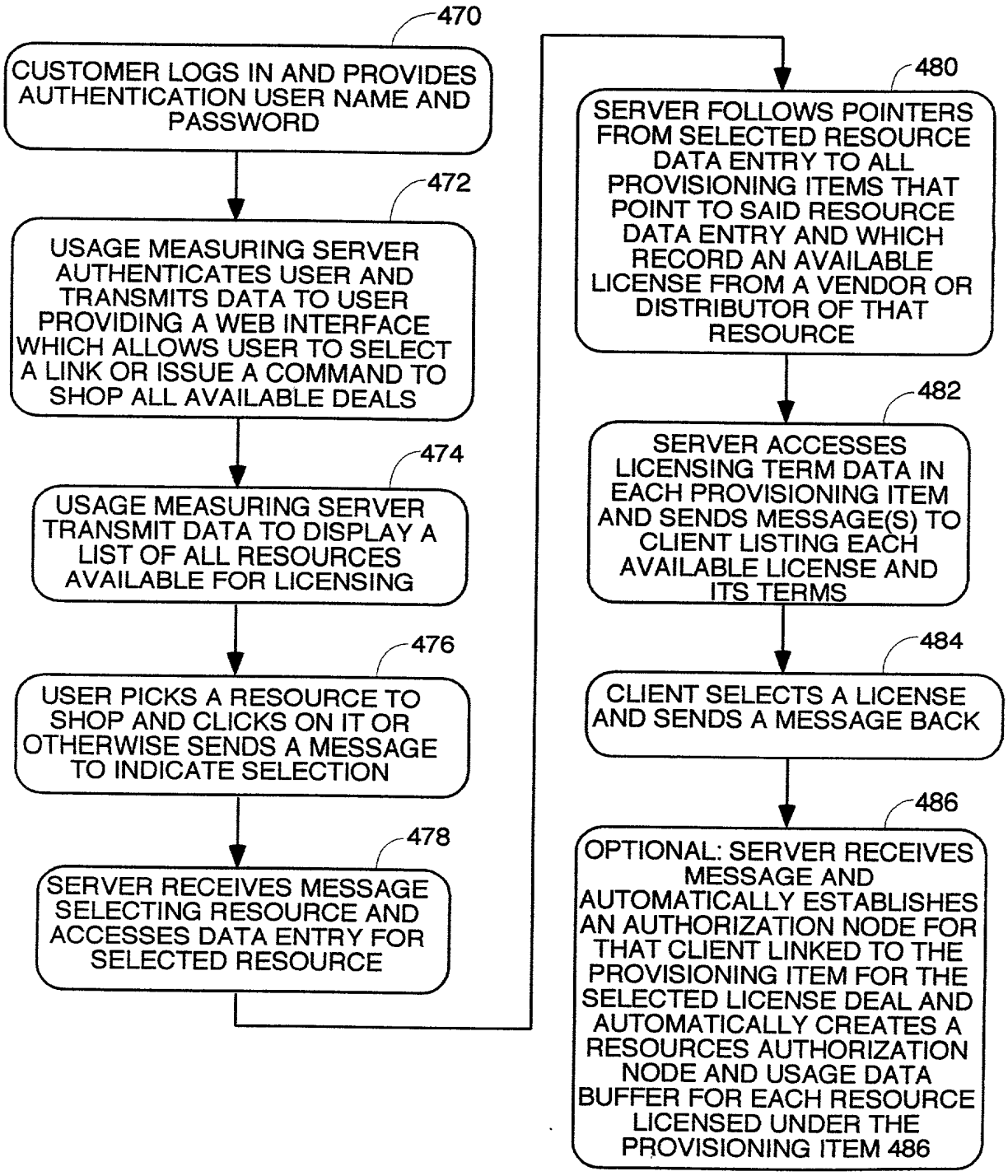

FIG. 14

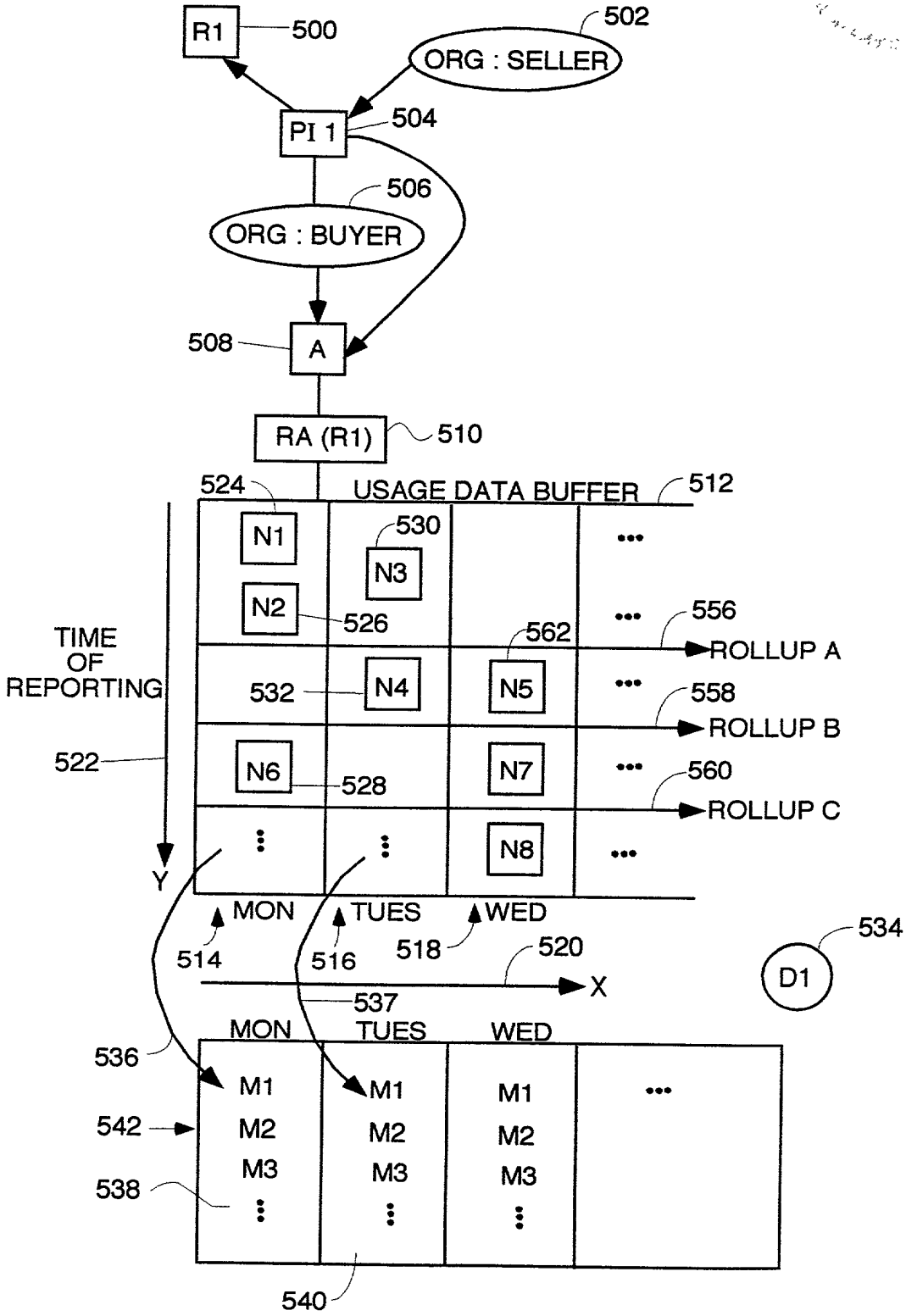
R1
500
ORG : SELLER
502
PI 1
504
ORG : BUYER
506
508
A
RA (R1)
510
524
USAGE DATA BUFFER
512
N1
530
N3
N2
526
562
556
ROLLUP A
TIME
OF
REPORTING
532
N4
N5
558
ROLLUP B
522
N6
528
N7
560
ROLLUP C
N8
Y
MON
TUES
WED
514
516
518
520
534
D1
X
537
MON
TUES
WED
536
M1
M1
M1
542
M2
M2
M2
M3
M3
M3
538
540

FIG. 15

PROCESS TO COLLECT USAGE DATA, PARTITION IT INTO TIME SEGMENTS AND GENERATE METRICS THEREFROM

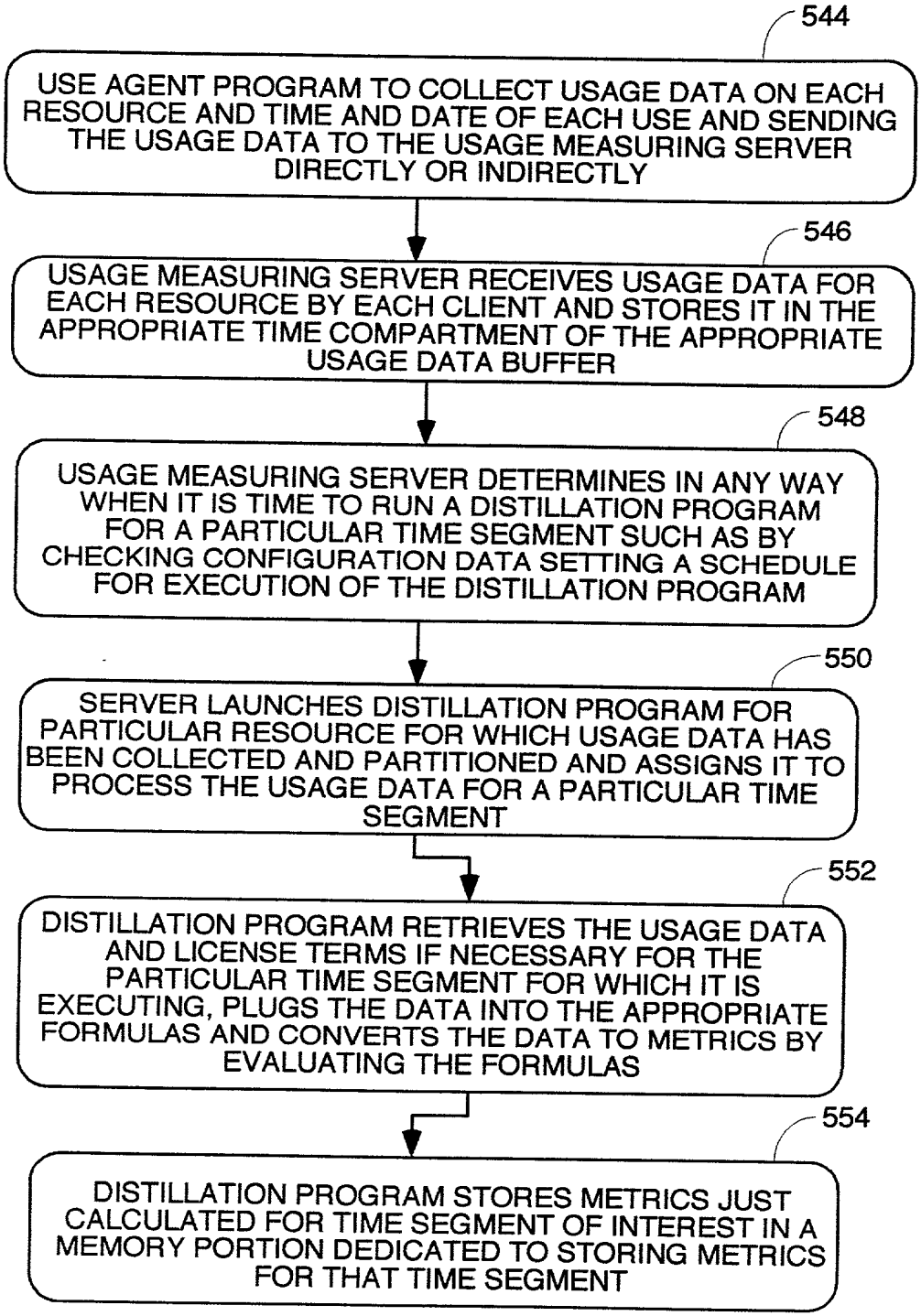

FIG. 16

ROLLUP A ID 39

	MON	TUES	WED	...
M1= CPU	10	1	0	...
M2= DOCS	500	50	0	...
M3= #PGS	759	71	0	...
	⋮	⋮	⋮	

FIG. 17

ALTERNATIVE ROLLUP B ID 40

MON	TUES	WED
0	3	2
0	70	40
0	139	96

FIG. 18

PREFERRED ROLLUP B ID 50

MON	TUES	WED	
10	4	2	
500	120	40	
759	210	96	

FIG. 19

ALTERNATIVE ROLLUP B ID 40

MON	TUES	WED
0	4	2
0	120	40
0	210	96

FIG. 20

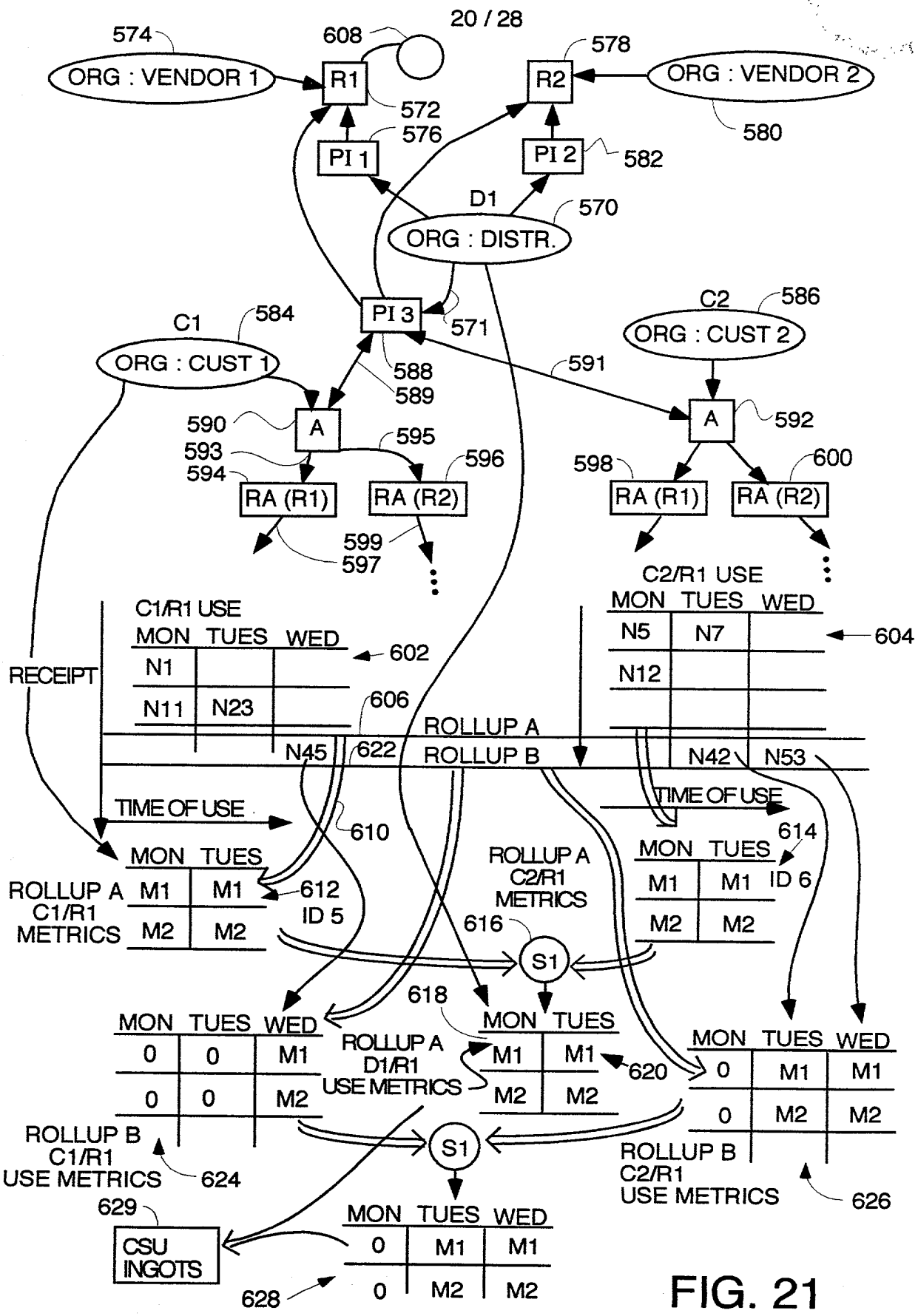
574
608
ORG : VENDOR 1
R1
572
R2
578
ORG : VENDOR 2
580
PI 1
576
PI 2
582
D1
570
ORG : DISTR.
PI 3
571
C1
584
ORG : CUST 1
588
589
591
C2
586
ORG : CUST 2
590
A
595
593
594
596
RA (R1)
RA (R2)
599
597
A
592
598
600
RA (R1)
RA (R2)
C1/R1 USE
MON TUES WED
N1
N11 N23
602
606
C2/R1 USE
MON TUES WED
N5 N7
N12
604
RECEIPT
ROLLUP A
ROLLUP B
N45
622
N42 N53
TIME OF USE
610
TIME OF USE
614
MON TUES
ROLLUP A C1/R1 METRICS
M1 M1
M2 M2
612
ID 5
ROLLUP A C2/R1 METRICS
MON TUES
M1 M1
M2 M2
ID 6
616
S1
618
MON TUES WED
0 0 M1
0 0 M2
ROLLUP A D1/R1 USE METRICS
MON TUES
M1 M1
M2 M2
620
MON TUES WED
0 M1 M1
0 M2 M2
ROLLUP B C1/R1 USE METRICS
624
S1
ROLLUP B C2/R1 USE METRICS
626
629
CSU INGOTS
MON TUES WED
0 M1 M1
0 M2 M2
628

FIG. 21

PROCESS FOR ONE PROTOCOL ACCESS TO USAGE/METRIC/CSU DATA FOR ALL LICENSEES OF A LICENSOR FROM A USAGE MEASURING SERVER

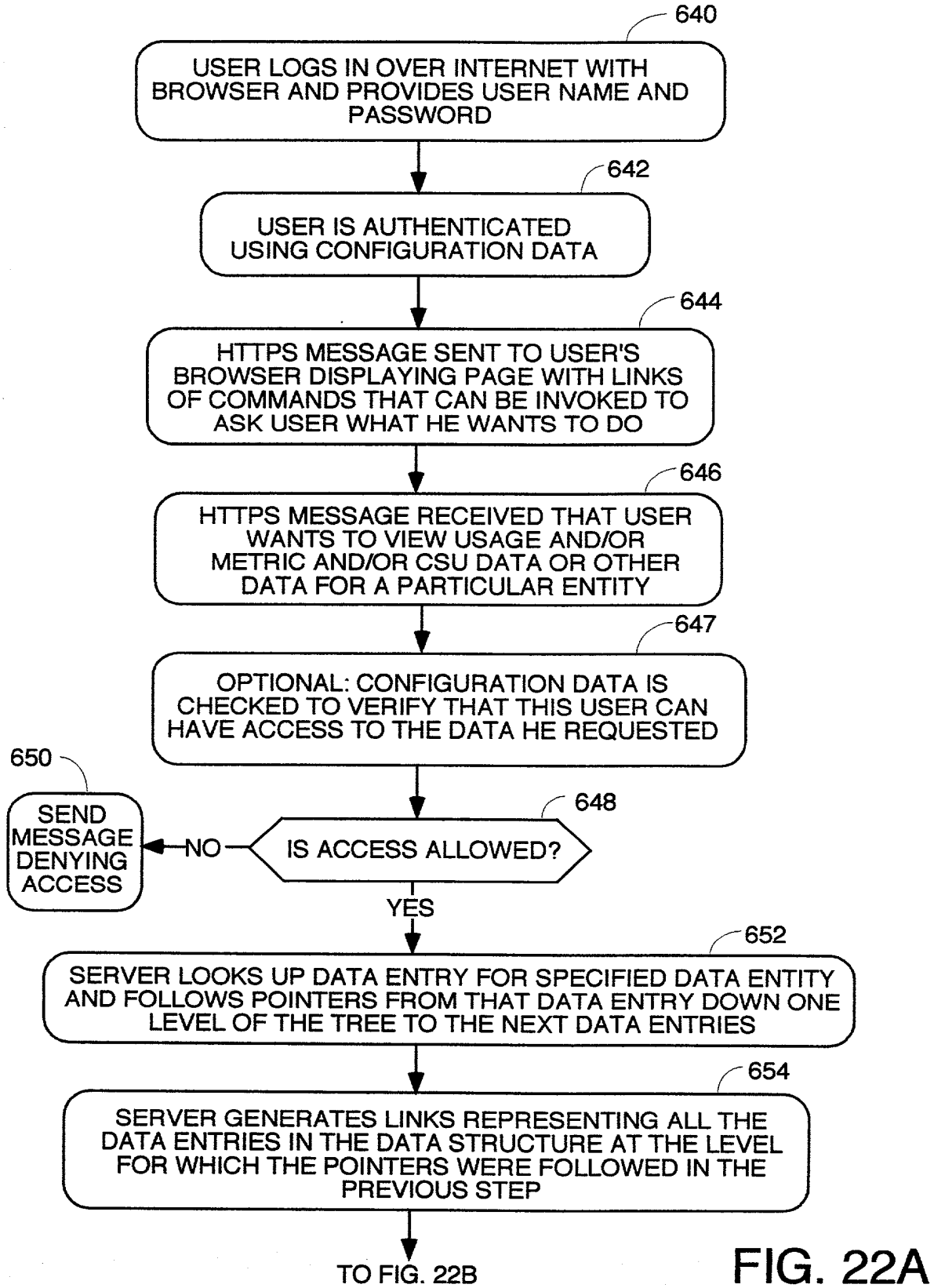

FIG. 22A

FROM FIG. 22A

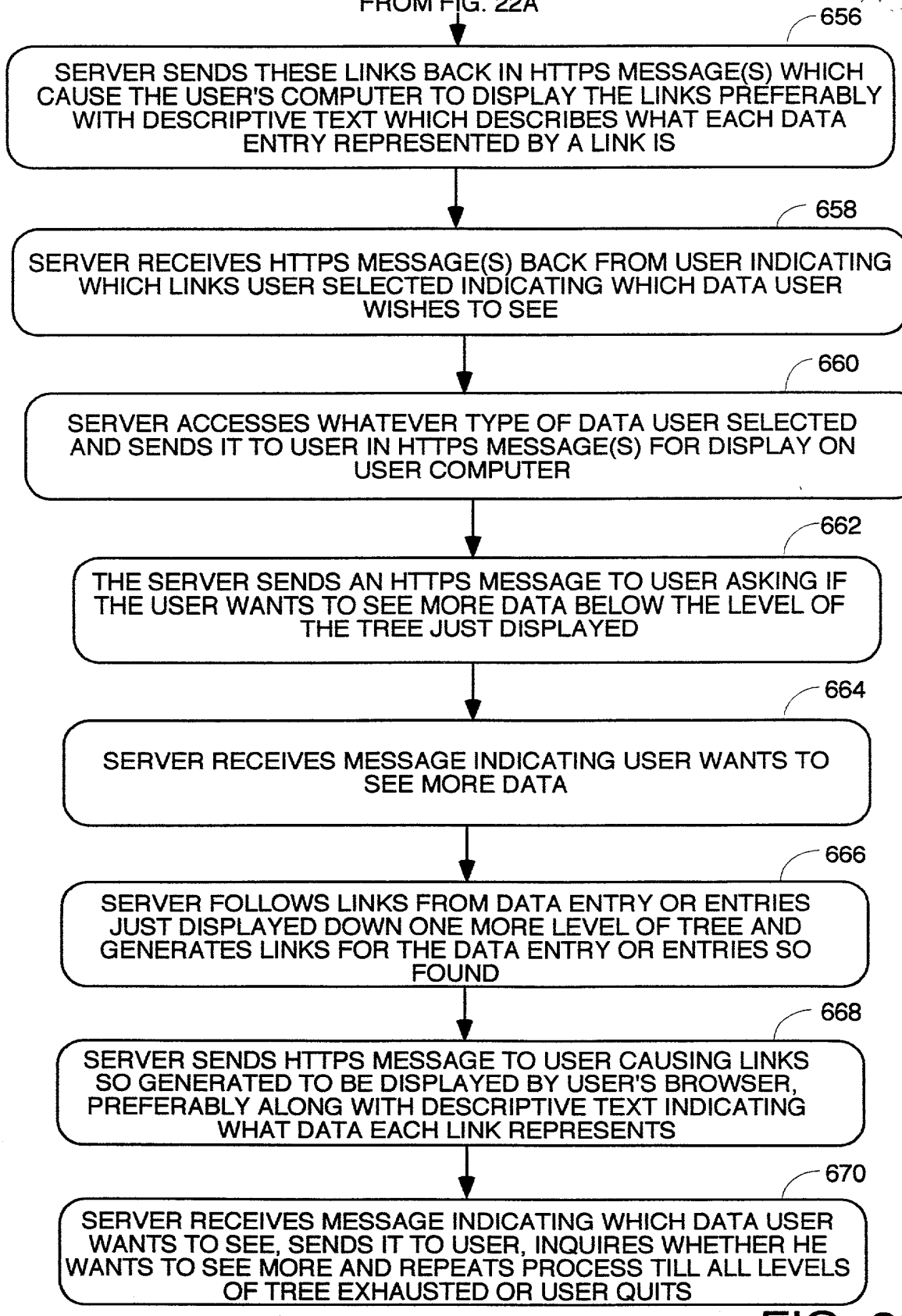

FIG. 22B

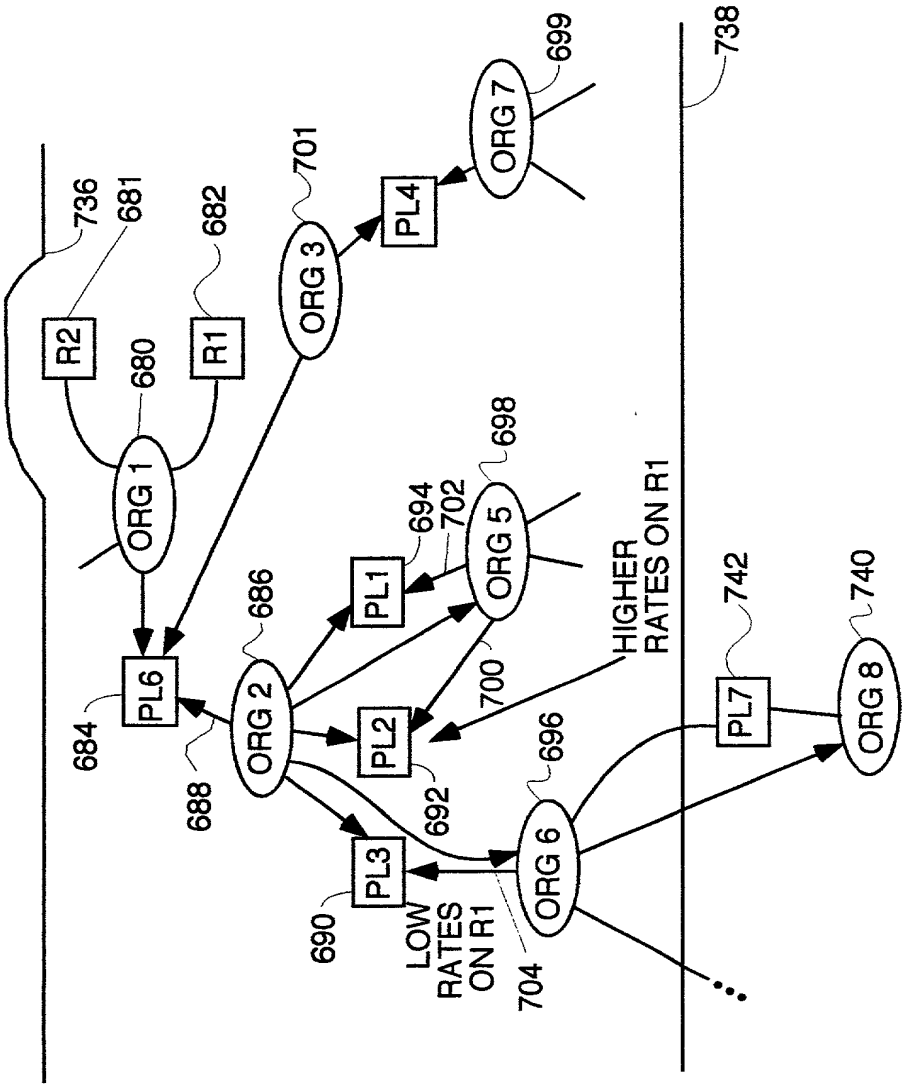
738
699
ORG 7
701
PL4
736
681
682
ORG 3
R2
R1
680
ORG 1
698
694
702
ORG 5
PL1
686
HIGHER
RATES ON R1
742
740
PL6
ORG 2
PL2
PL7
ORG 8
700
684
688
692
696
ORG 6
PL3
690
LOW
RATES
ON R1
704
SECURITY BARRIERS

FIG. 23

A PROCESS TO IMPLEMENT SECURITY BARRIERS TO PREVENT USERS FROM VIEWING DATA IN A USAGE MEASURING SERVER DATA STRUCTURE THAT THE USER NOT AUTHORIZED TO VIEW

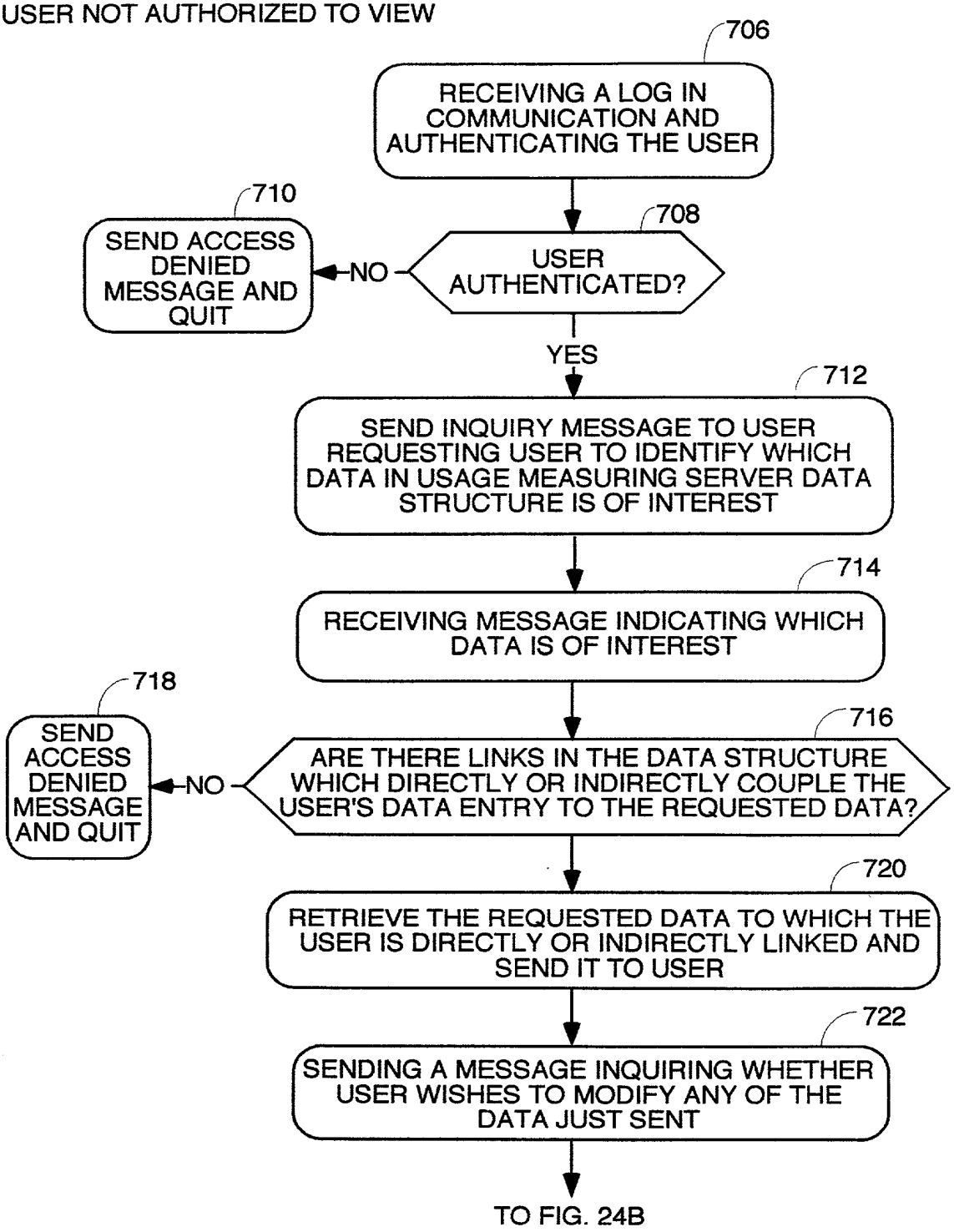

FIG. 24A

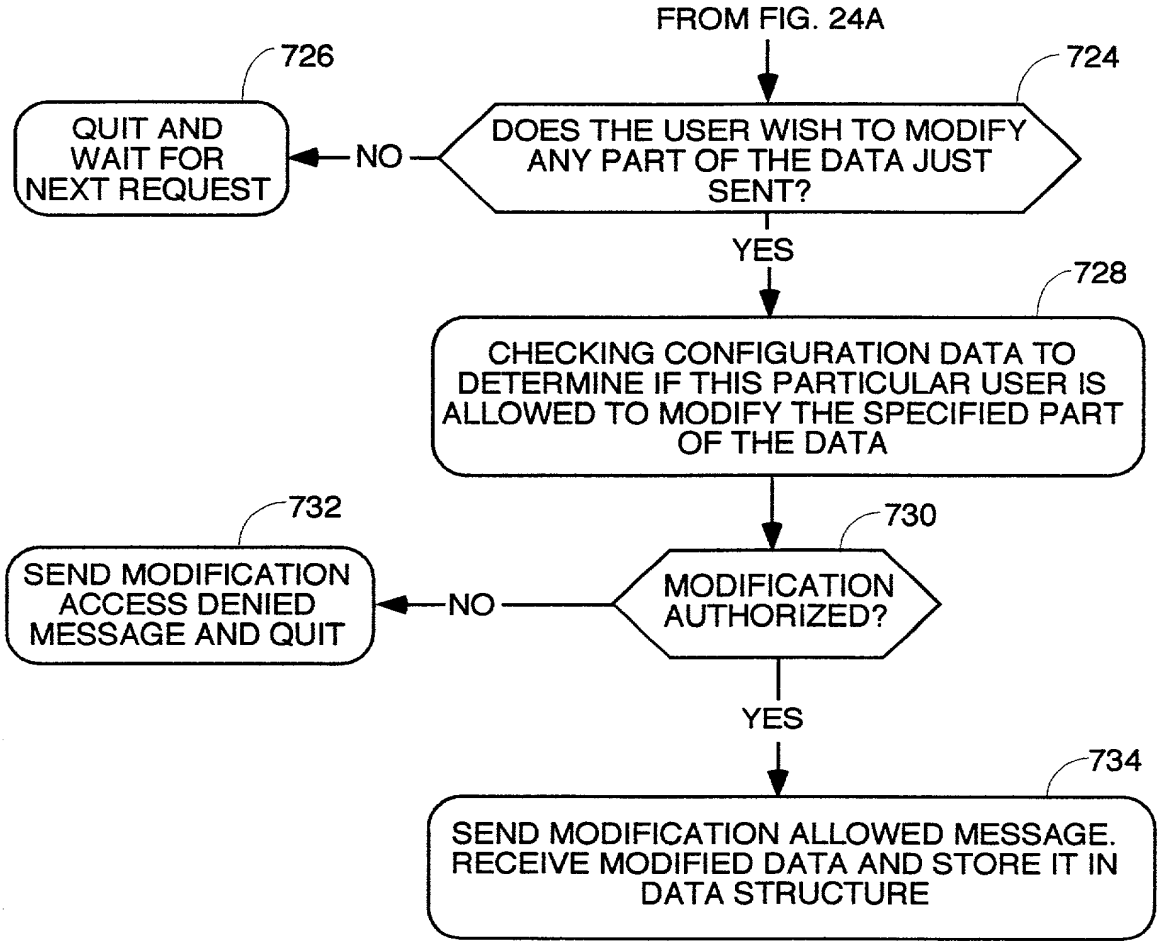
FROM FIG. 24A
724
DOES THE USER WISH TO MODIFY ANY PART OF THE DATA JUST SENT?
NO
726
QUIT AND WAIT FOR NEXT REQUEST
YES
728
CHECKING CONFIGURATION DATA TO DETERMINE IF THIS PARTICULAR USER IS ALLOWED TO MODIFY THE SPECIFIED PART OF THE DATA
730
MODIFICATION AUTHORIZED?
NO
732
SEND MODIFICATION ACCESS DENIED MESSAGE AND QUIT
YES
734
SEND MODIFICATION ALLOWED MESSAGE. RECEIVE MODIFIED DATA AND STORE IT IN DATA STRUCTURE

FIG. 24B

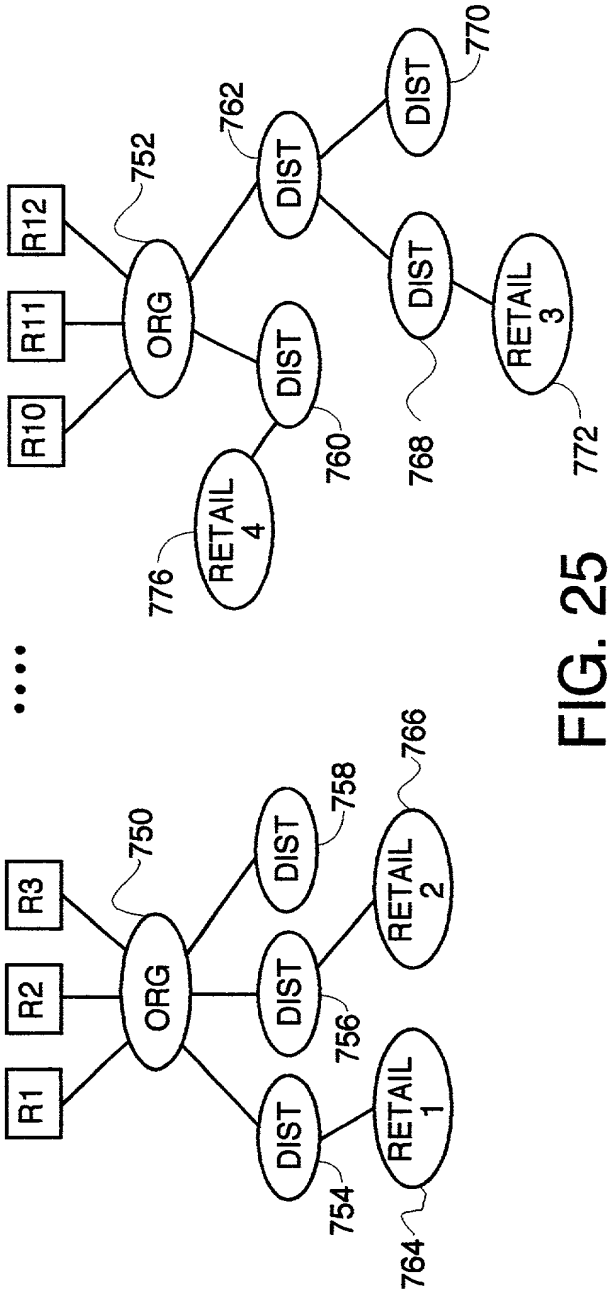
R1
R2
R3
R10
R11
R12
ORG
750
752
DIST
754
DIST
756
DIST
758
DIST
760
DIST
762
DIST
768
DIST
770
RETAIL 1
764
RETAIL 2
766
RETAIL 3
772
RETAIL 4
776

FIG. 25

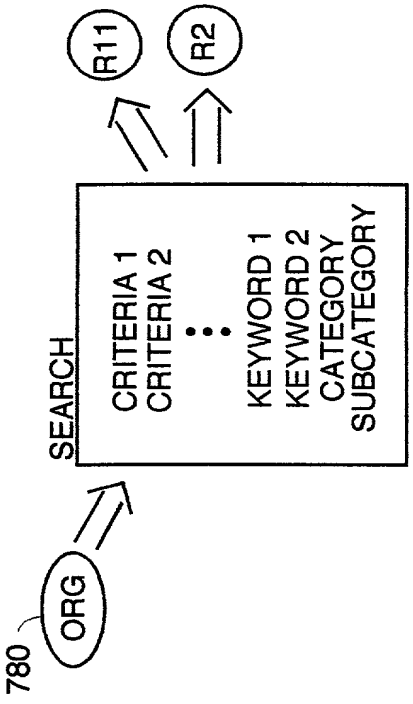
ORG
780
SEARCH
CRITERIA 1
CRITERIA 2
KEYWORD 1
KEYWORD 2
CATEGORY
SUBCATEGORY
R11
R2

FIG. 26

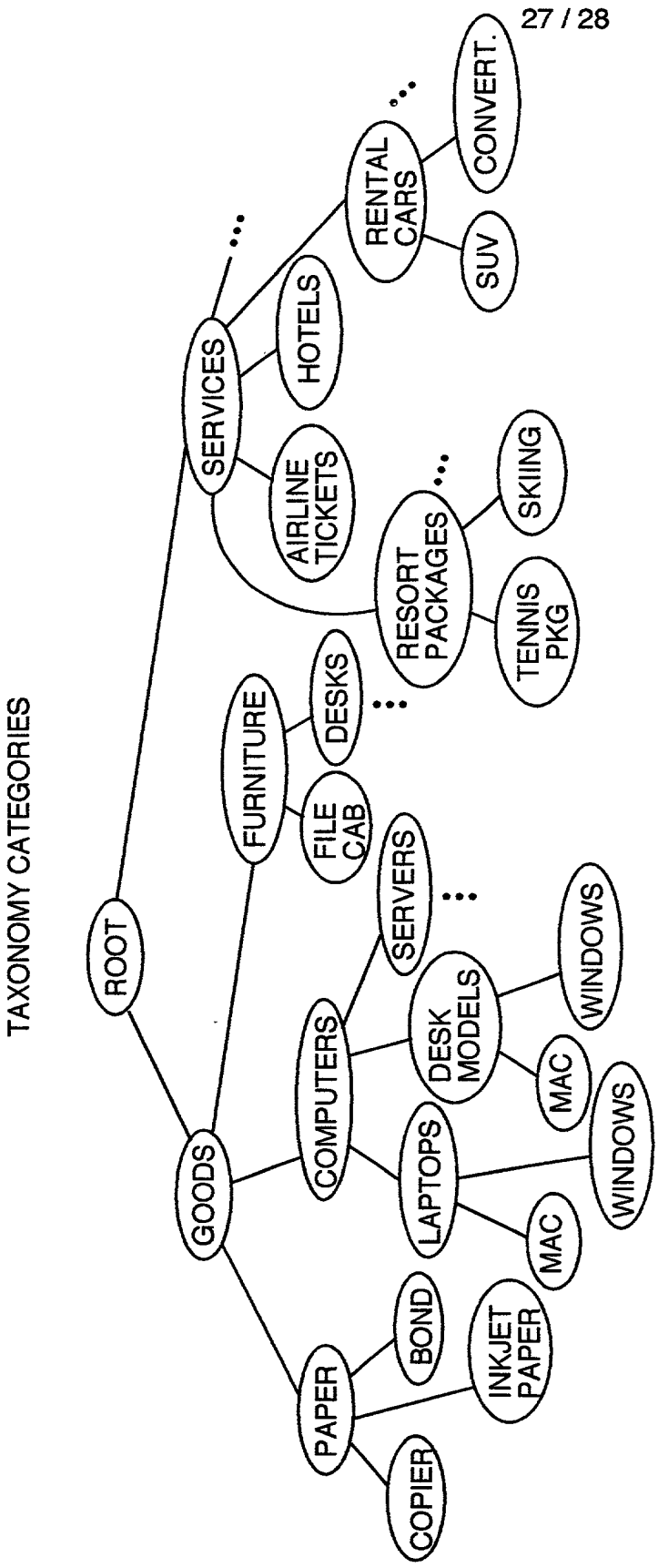
TAXONOMY CATEGORIES
ROOT
GOODS
SERVICES
HOTELS
RENTAL CARS
CONVERT.
SUV
AIRLINE TICKETS
RESORT PACKAGES
SKIING
TENNIS PKG
FURNITURE
DESKS
FILE CAB
COMPUTERS
SERVERS
DESK MODELS
WINDOWS
MAC
LAPTOPS
WINDOWS
MAC
PAPER
BOND
INKJET PAPER
COPIER

FIG. 27

SERVER PROCESSINGTO IMPLEMENT ONE-STOP SHOPPING SEARCHING OF THE DATA STRUCTURE BASED UPON USER-DEFINED CRITERIA

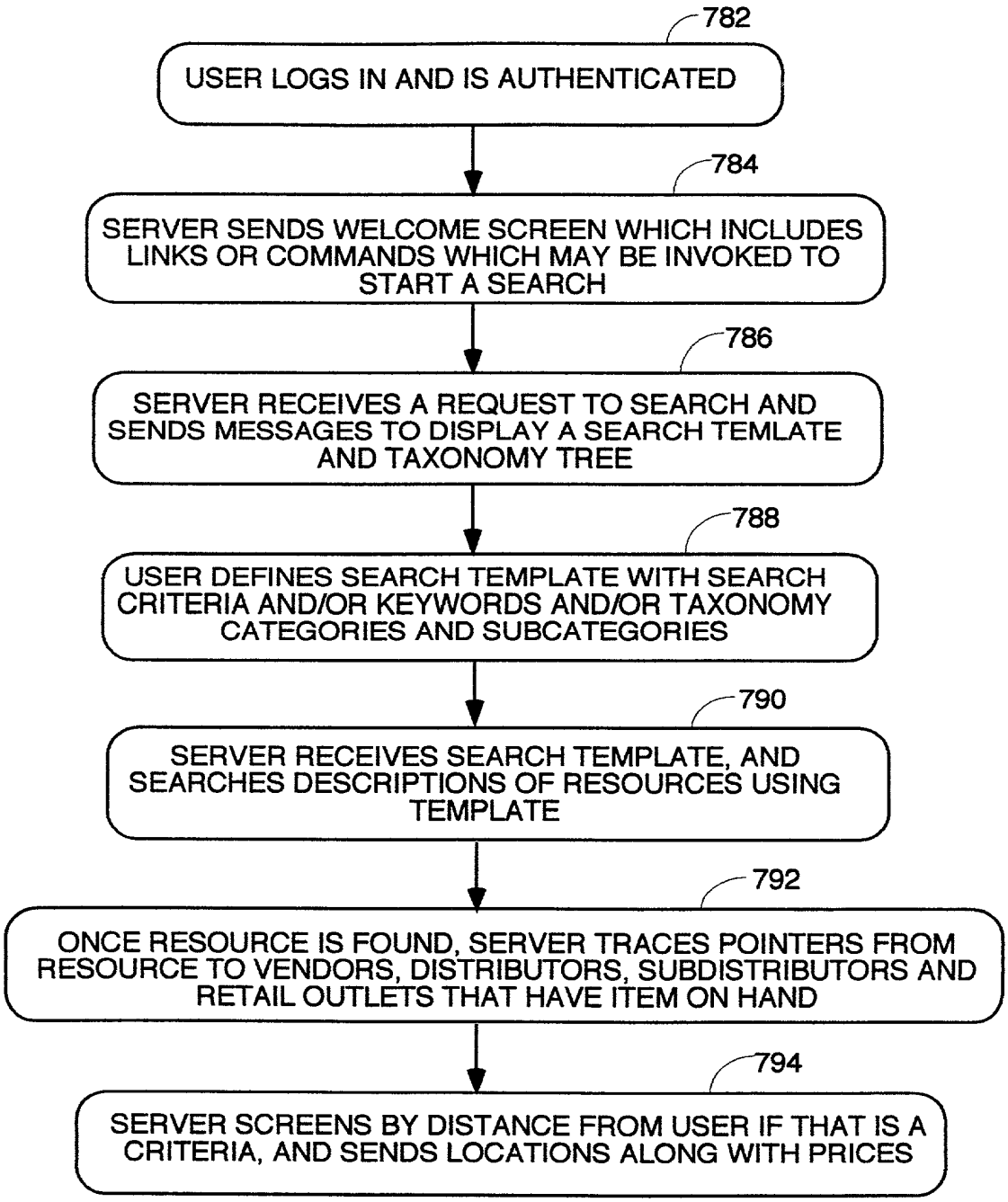

FIG.28